Valley Water

This is the final report for the 2012 Safe, Clean Water and Natural Flood Protection Program.

FY 2020-21 | YEAR 8

Safe, Clean Water and Natural Flood Protection

Safe, Clean Water
and Natural Flood Protection
Fiscal Year 2020–2021 | Year 8

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November 18, 2021

Valley Water
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Valley Water

Safe, Clean Water and Natural Flood Protection Fiscal Year 2020–21 Annual Report

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Valley Water

Safe, Clean Water and Natural Flood Protection Fiscal Year 2020–21 Annual Report

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MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

September 2021

Fiscal Year 2020-21 (FY21) marks the eighth and final year of the 2012 voter-approved Safe, Clean Water and Natural Flood Protection Program (2012 Program). On November 3, 2020, Santa Clara County voters overwhelmingly approved the renewed Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water Program) that replaced the 2012 Program in its entirety on July 1, 2021.

The renewed Safe, Clean Water Program addresses new and growing challenges and reflects the community's current needs and priorities. Climate change means we will see more frequent and severe weather, including flooding and droughts. Currently, Santa Clara County is in an extreme drought. The renewed program includes a new project providing funding for conservation programs, including rebates, that will help protect our water supply.

While almost all the active projects from the 2012 Program have been carried into the renewed Safe, Clean Water Program, some of the project key performance indicators (KPIs) and schedules were realigned. For details on the renewed Safe, Clean Water Program and its project KPIs and schedules, visit ***https://www.valleywater.org/safe-clean-water-and-natural-flood-protection-program.***

Each year, Valley Water prepares a report providing a progress update for each of the projects under the program. This report (Year-8 annual report) presents a status update on the implementation of projects during FY21 under the following 2012 Program priorities:

Priority A: Ensure a Safe, Reliable Water Supply

Priority B: Reduce Toxins, Hazards and Contaminants in our Waterways

Priority C: Protect our Water Supply from Earthquakes and Natural Disasters

Priority D: Restore Wildlife Habitat and Provide Open Space

Priority E: Provide Flood Protection to Homes, Businesses, Schools and Highways

To date, Valley Water has completed seven (7) projects and multiple KPIs for various projects creating the foundation for many other projects to be completed in the coming years. Highlights of FY21 accomplishments consistent with Valley Water's core mission areas include:

Water Supply

- **Anderson Dam Seismic Retrofit:** In June 2021, Valley Water began the construction phase of the Anderson Dam Tunnel Project (ADTP), which is part of the larger Anderson Dam Seismic Retrofit Project (ADSRP) to strengthen the existing dam and spillway so it can safely withstand a large earthquake. The tunnel project

is scheduled to be completed in December 2023. Construction of the remaining ADSRP elements, including the high-level outlet works, removing and reconstructing the spillway, and the dam embankment, will commence subsequently, will take seven (7) years and is dependent on the permit requirements and the field conditions. Furthermore, approximately 40% of the Coyote Creek Flood Protection Project (CCFPP) has been expedited and is being funded by the Water Utility Enterprise (Fund 61) as it is necessary to be constructed by the end of 2023 to prevent flooding within the urbanized areas of San José as a result of water releases from the new tunnel.

- **Pipeline Reliability:** Valley Water completed designs for three (3) line valves and 60% design for the fourth line valve. Once completed, this project will improve water supply reliability by improving the infrastructure delivering safe, clean water.

Flood Protection

- **Permanente Creek Flood Protection:** In April 2021, Valley Water completed the project with the completion of two stormwater capture basins in Rancho San Antonio County Park and Open Space Preserve, thus providing flood protection to homes and businesses along a 10-mile stretch of Permanente Creek in Los Altos and Mountain View. The detention basins will capture and gradually release stormwater during a significant storm. As part of the overall project, in 2020, Valley Water completed new baseball fields at McKelvey Park that double as a place to contain floodwaters when Permanente Creek overflows. In 2018, sections of Permanente and Hale creeks were also widened to improve the creeks' capacity to carry stormwater safely.

- **Upper Llagas Creek Flood Protection:** In April 2021, Valley Water awarded an approximately $44 million construction contract for Phase 2A, including construction of the underground high-flow tunnel and twin reinforced concrete box culverts. During the year, Valley Water also completed the construction of the on-site compensatory mitigation, Lake Silveira wetlands. The creation of the wetland habitat is part of the Phase 1 construction project that began in FY20.

- **Sediment Removal and Vegetation Control:** Valley Water completed 12 sediment removal projects, removing 55,878 cubic yards of sediment to reduce flood risks by ensuring flood protection projects continue to provide the protection they were designed to give. The Safe, Clean Water Program funds 14% of this work. Valley Water also completed approxmately 1,153 acres of in-stream vegetation management to reduce flood risk along 135 miles of streams throughout the county.

Stewardship

- **Almaden Lake Improvement Project:** In May 2021, the Valley Water Board selected the Almaden Lake Project to be constructed under Fish Habitat and Passage Improvement (Project D4) and deliver KPI #2 to "Construct 1 creek/lake separation project in partnership with local agencies." The Board also certified the final Environmental Impact Report for the Almaden Lake Improvement Project that will separate Alamitos Creek from Almaden Lake. This will improve fish passage for native fish to the upper Guadalupe Watershed and address the lake's mercury-related water quality issues.

- **Revitalize Stream, Upland and Wetland Habitat:** Completed KPI #1 of the project by revitalizing 7.7 acres through the removal of invasive and non-native vegetation stands in FY21. Valley Water, along with its partners, removed a total of approximately 87 acres of invasive and non-native vegetation stands from FY14 to FY21 and delivered on KPI #1 to "Revitalize at least 21 acres, guided by the 5 Stream Corridor Priority Plans, through native plant revegetation and removal of invasive exotic species." The remaining

two project KPIs – KPI #2 to "Provide funding for revitalization of at least 7 of 21 acres through community partnerships" and KPI #3 to "Develop at least 2 plant palettes for use on revegetation projects to support birds and other wildlife"—were completed in FY19 and FY15, respectively.

- **Trash Removal:** Of the seven (7) projects in Priority B, five (5) include trash removal components to reduce and remove contaminants in our local streams and bay. This work is accomplished not only by Valley Water but with the help of volunteers and grantees alike. In FY21, 348 tons of trash were removed from our waterways.
- **Safe, Clean Water Stewardship Grants:** Through Priorities A, B and D, Valley Water awarded $489,042 in grants and partnerships in FY21. These dollars were for local grantees for projects addressing issues such as new water conservation activities, pollution prevention, watershed stewardship, cleanup, education and outreach activities, and restoring wildlife habitat.

To ensure transparency and accountability, the Board established an Independent Monitoring Committee (IMC) to track the program's progress and ensure the outcomes are achieved cost-efficiently. Each year, the Board authorizes the finalization of the prior fiscal year's annual report and submittal to the IMC for its review.

Following the Year-7 annual report review, the IMC made recommendations to improve the report, which were presented to the Board. These improvements have been incorporated into the Year-8 annual report. One such improvement is a new financial summary section highlighting what is being shared with the community in the financial appendices that follow. Other changes include an updated report format with all completed projects tabbed at the back of the report under the "Completed Projects" section; revised column headers in financial appendices to communicate more clearly; and infographics reflecting the funding breakdown for projects with more than one Valley Water funding source. Valley Water appreciates each IMC member for volunteering and looks forward to the committee's review of the Year-8 annual report.

The accomplishments presented in this report would not have been achieved without Valley Water's dedicated employees, each of whom is committed to the success of the Safe, Clean Water Program.

The FY21 annual report and independent audit are available to the public at ***https://www.valleywater.org/safe-clean-water-and-natural-flood-protection-program/safe-clean-water-program-archive*** under the section "2012 Safe, Clean Water & Natural Flood Protection Program: Reports and Documents."

We welcome your inquiries and insightful comments on the FY21 annual report.

Sincerely,

Rick L. Callender, Esq.
Chief Executive Officer
Valley Water

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List of Abbreviations

Abbreviation	Description
AAC	Adopt-A-Creek
ACWA	Association of California Water Agencies
AMI	Advanced Metering Infrastructure
ADSRP	Anderson Dam Seismic Retrofit Project
AQPI	Advanced Quantitative Precipitation Information
AVW	Access Valley Water
BART	Bay Area Rapid Transit
BASMAA	Bay Area Stormwater Management Agencies Association
BCDC	San Francisco Bay Conservation and Development Commission
BMP	Best management practice
BRRIT	Bay Restoration Regulatory Integration Team
Cal-IPC	California Invasive Plan Council
CAP	Continuing Authorities Program
CASQA	California Stormwater Quality Association
CDFW	California Department of Fish and Wildlife
CCNEET	Coyote Creek Native Ecosystem Enhancement Tool
CEO	Chief Executive Officer
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFS	Cubic feet per second
CIP	Capital Improvement Program
CLOMR	Conditional Letter of Map Revision
CRAM	California Rapid Assessment Method
CRS	Community Rating System
CSC	Clean, Safe Creeks and Natural Flood Protection Plan
CY	Cubic yards
DEIR	Draft Environmental Impact Report
DSOD	Division of Safety of Dams
EAP	Emergency Action Plan
EOC	Emergency Operations Center

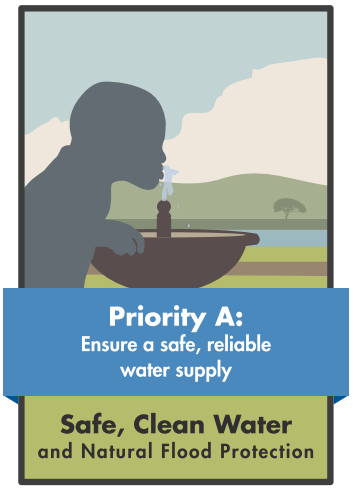
List of Abbreviations

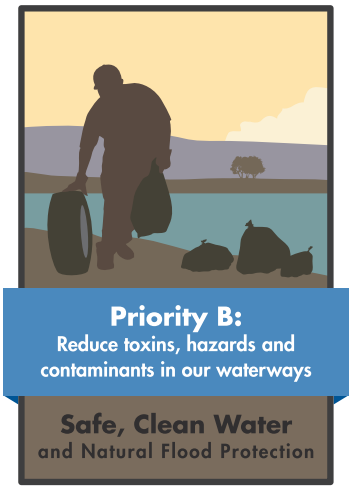
EIA	Economic Impact Area
EIR	Environmental Impact Report
ESA	Endangered Species Act
FCSA	Feasibility Cost Share Agreement
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FY	Fiscal year
GI	General Investigation
GIS	Geographic Information Systems
GSI	Green Stormwater Infrastructure
IMC	Independent Monitoring Committee
IRWMP	San Francisco Bay Area Integrated Regional Water Management Plan
KPI	Key performance indicator
LEDPA	Least Environmentally Damaging Practicable Alternative
LFA	Limiting Factors Analysis
LOMR	Letter of Map Revision
LWD	Large woody debris
MAC	Multi-Agency Coordination
MidPen	Mid-Peninsula Regional Open Space District
MOA	Memorandum of agreement
MOU	Memorandum of understanding
NASA	National Aeronautics and Space Administration
NCCP	Natural Communities Conservation Plan
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
O&M	Operations and maintenance
RFP	Request for proposal
RWQCB	Regional Water Quality Control Board

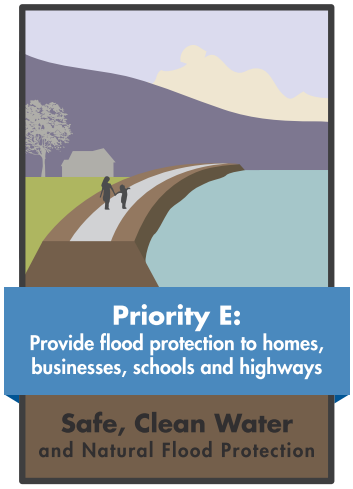
List of Abbreviations

RWRC	Recycling & Waste Reduction Commission
SBSPRP	South Bay Salt Pond Restoration Project
SCC	Santa Clara County
SCPP	Stream Corridor Priority Plan
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SFCJPA	San Francisquito Creek Joint Powers Authority
SFEI	San Francisco Estuary Institute
SFPUC	San Francisco Public Utilities Commission
SJPD	San José Police Department
SMP	Stream Maintenance Program
SPRR	Southern Pacific Railroad
SWRCB	State Water Resources Control Board
SWRP	Storm Water Resource Plan
TAC	Technical Advisory Committee
TMDL	Total Maximum Daily Load
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
Valley Water	Santa Clara Valley Water District
VHA	Santa Clara Valley Habitat Agency
VHP	Santa Clara Valley Habitat Plan
VTA	Santa Clara Valley Transportation Authority

Safe, Clean Water and Natural Flood Protection







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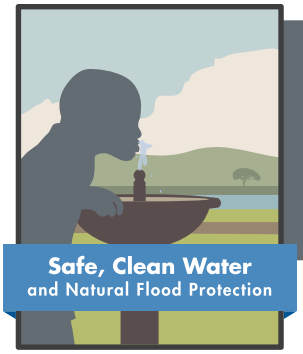


FY 2020–2021 Annual Report

Safe, Clean Water and Natural Flood Protection

Valley Water

PROGRAM SUMMARY

In November 2012, Santa Clara Valley voters approved the Safe, Clean Water and Natural Flood Protection Program (2012 Program), a 15-year strategy to ensure uninterrupted water resources services in Santa Clara County. The 2012 Program was developed through extensive community collaboration to prepare for the scheduled sunset of Clean, Safe Creeks and Natural Flood Protection Plan (CSC) funding. Subsequently, on November 3, 2020, county voters overwhelmingly approved the renewed Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water Program) that replaced the 2012 Program on July 1, 2021. For details on the renewed Safe, Clean Water Program, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

To ensure transparency and accountability, Valley Water publishes an annual report providing a progress update for each project under the following 2012 Program priorities.

Priority A: Ensure a Safe, Reliable Water Supply

Priority B: Reduce Toxins, Hazards and Contaminants in our Waterways

Priority C: Protect our Water Supply from Earthquakes and Natural Disasters

Priority D: Restore Wildlife Habitat and Provide Open Space

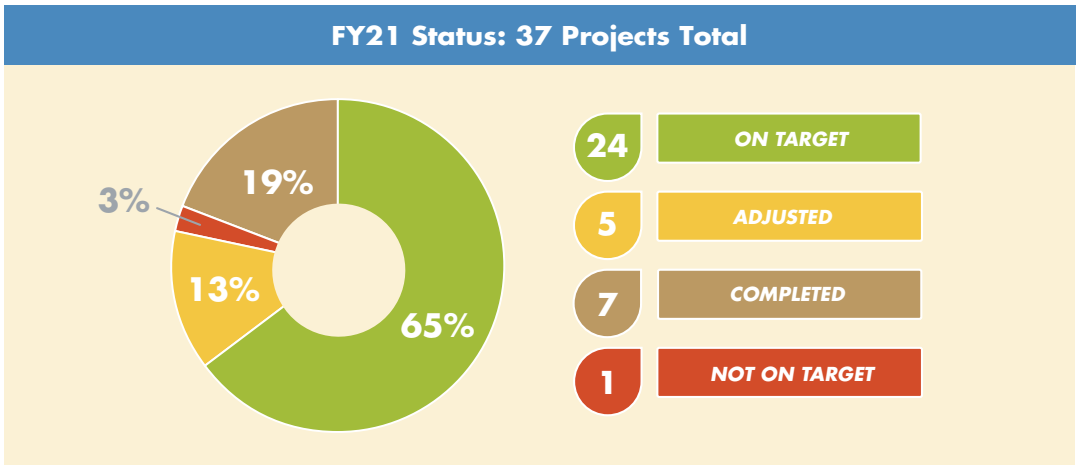
Priority E: Provide Flood Protection to Homes, Businesses, Schools and Highways

This report is the eighth and final annual report to be prepared for the 2012 Program. Since it is the final report for the program that ended on June 30, 2021, the 15-Year Adjusted Plan for capital projects is based on the FY2021-25 Five-Year Capital Improvement Program (CIP) and its FY21 implementation. It does not reflect the funding allocations developed as part of the FY2022-26 Five-Year CIP, which marked the start of the renewed Safe, Clean Water that replaced the 2012 Program. The report provides project status towards accomplishing the key performance indicators (KPIs) and the targets identified in the Safe, Clean Water 5-Year Implementation Plan for FY 2019–2023:

- On Target – Status indicates the project is on track to meet targets;
- Adjusted – Status indicates the potential that targets will not be met and implementation required a schedule adjustment (future year status will be based upon the adjusted schedule);
- Not on Target – Status indicates that the target has not been or will not be met;
- Modified – Status indicates the Board formally modified the project following a public hearing (future year status' will be based upon the modified project targets);
- Completed – Status indicates that the project has been completed and the KPIs have been met.

There are 37 projects under the 2012 Program. As shown in Table 1 (p. 4), 65% (24 projects) are On Target ( ); 13% (5 projects) required schedule Adjustments ( ); 3% (1 project) was Not on Target ( ); and 19% (7 projects) were Completed ( ). See Graph 1 (p. 2).

Graph 1



In FY21, Project B4: Good Neighbor Program: Encampment Cleanup was Not on Target as encampment cleanups were severely curtailed because of the many restrictions concerning unhoused encampment cleanups in response to the COVID-19 pandemic. In keeping with the Center for Disease Control guidance, Valley Water suspended encampment abatement until mid-March 2021, except for instances of particular encampments obstructing Valley Water's planned work or negatively impacting its ability to meet regulatory or other legal obligations. However, Valley Water continued to perform cleanups adjacent to homeless encampments to reduce the amount of trash and debris in local waterways.

For Fiscal Year 2020–21 (FY21), the adjusted budget for the 2012 Program totaled $148 million. Actual funds expended and encumbered as of June 30, 2021, were $88 million, approximately 59% of the 2012 Safe, Clean Water Program's adjusted budget. Underspending was primarily due to delays in capital projects, especially the flood protection projects, because of various reasons, such as lack of federal funding, design changes and coordination with property owners to obtain easements. Among the capital projects underspent were: Upper Penitencia Creek (E4), Upper Guadalupe River (E8); Sunnyvale East and West Channels (CSC); and Hale Creek Enhancement Pilot Project (D6). Berryessa Creek Flood Protection Project (CSC), which completed construction in FY18, was underspent because the USACE had yet to complete the final closeout of Valley Water's share of design and construction costs. Additionally, underspending was also due to the impacts of the COVID-19 pandemic on operations projects such as B1: Impaired Water Bodies Improvement; B3: Pollution Prevention Partnership and Grants, and B4: Good Neighbor Program: Encampment Cleanup.

To address recommendations made by the Independent Monitoring Committee (IMC), Valley Water utilizes a rating system for capital projects that include confidence levels for schedule, funding, permits and jurisdictional complexity (the level to which a project's deliverables can be impacted by other entities or jurisdictions). By applying a confidence level to each of these topics, the IMC and community will be able to identify the areas of concern for each project that could impact the probability for the project to remain On Target. The confidence levels are addressed under the Opportunities and Challenges section for each of the capital projects. Appendix D can be referenced to delve into the confidence levels for each capital project, as well as demonstrate the jurisdictional complexity related to funding sources, regulatory permitting and coordination between cities, counties and other agencies. Listed below are the three (3) confidence levels and their definitions:

- **High** – Applies to projects that have achieved the following: received full funding, received regulatory permits, met schedule milestones (and will continue to move forward on schedule) and, if applicable, jurisdictional complexity issues have been resolved.
- **Moderate** – Applies to projects that are in the process of the following: receiving funding from other sources, receiving permits, recommending the Board approve a schedule adjustment and, if applicable, resolving jurisdictional complexity issues.

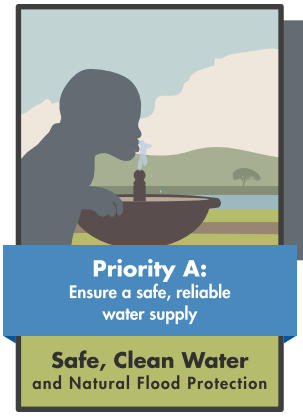
- **Low** – Applies to projects that have a high probability of experiencing or already have been denied funding, denied permits, delayed in schedule and, if applicable, jurisdictional complexity issues that are impacting completion of the project.

In response to FY20 IMC recommendations, the report incorporates several improvements. One such improvement is a new financial summary section highlighting what is being shared with the community in the financial appendices that follow. Additionally, Appendix A-1.1: Annual Financial Summary table and project-specific Financial Summary tables now include separate columns showing "Budget Adjustment" and "Carryforward." Other changes include an updated report format with all completed projects tabbed at the back of the report under the "Completed Projects" section; and pie charts showing the funding breakdown for projects with more than one Valley Water funding source. Furthermore, the Glossary section now includes the definition of financial terms, such as "Capital Projects", "Operations Projects", "Carryforward" and "Budget Adjustment", etc. For further project and contact information, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program.***

Table 1

Project	Project Description	Status
Priority A: Ensure a Safe, Reliable Water Supply		
A1	Main and Madrone Avenue Pipelines Restoration	COMPLETED
A2	Safe, Clean Water Partnerships and Grants	ON TARGET
A3	Pipeline Reliability Project	ADJUSTED
Priority B: Reduce Toxins, Hazards, and Contaminants in our Waterways		
B1	Impaired Water Bodies Improvement	ON TARGET
B2	Interagency Urban Runoff Program	ON TARGET
B3	Pollution Prevention Partnerships and Grants	ON TARGET
B4	Good Neighbor Program: Encampment Cleanup	NOT ON TARGET
B5	Hazardous Materials Management and Response	ON TARGET
B6	Good Neighbor Program: Remove Graffiti and Litter	ON TARGET
B7	Support Volunteer Cleanup Efforts and Education	ON TARGET
Priority C: Protect our Water Supply from Earthquakes and Natural Disasters		
C1	Anderson Dam Seismic Retrofit	ON TARGET
C2	Emergency Response Upgrades	ON TARGET
Priority D: Restore Wildlife Habitat and Provide Open Space		
D1	Management of Revegetation Projects	ON TARGET
D2	Revitalize Stream, Upland and Wetland Habitat	COMPLETED
D3	Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	ON TARGET
D4	Fish Habitat and Passage Improvement	ADJUSTED
D5	Ecological Data Collection and Analysis	ON TARGET
D6	Creek Restoration and Stabilization	ADJUSTED
D7	Partnerships for the Conservation of Habitat Lands	COMPLETED
D8	South Bay Salt Ponds Restoration Partnership	ON TARGET
Priority E: Provide Flood Protection to Homes, Businesses, Schools, and Highways		
E1.1	Vegetation Control for Capacity	ON TARGET
E1.2	Sediment Removal for Capacity	ON TARGET
E1.3	Maintenance of Newly Improved Creeks	ON TARGET
E1.4	Vegetation Management for Access	ON TARGET
E2	Emergency Response Planning	ON TARGET
E3	Flood Risk Reduction Studies	ON TARGET
E4	Upper Penitencia Creek Flood Protection	ON TARGET
E5	San Francisquito Creek Flood Protection	ON TARGET
E6	Upper Llagas Creek Flood Protection	ON TARGET
E7	San Francisco Bay Shoreline Protection	ON TARGET
E8	Upper Guadalupe River Flood Protection	ADJUSTED
Other Flood Protection Projects and Clean, Safe Creeks Grants Projects		
	Permanente Creek Flood Protection	COMPLETED
	Sunnyvale East and Sunnyvale West Channels Flood Protection	ADJUSTED
	Berryessa Creek Flood Protection	COMPLETED
	Coyote Creek Flood Protection	ON TARGET
	Calabazas Creek Flood Protection	COMPLETED
	Clean Safe Creeks Grants Projects	COMPLETED

The FY21 annual report is available at ***https://www.valleywater.org/safe-clean-water-and-natural-flood-protection-program/safe-clean-water-program-archive*** under "2012 Safe, Clean Water & Natural Flood Protection Program: Reports and Documents."



Priority A

Ensure a Safe, Reliable Water Supply

Projects under Priority A will upgrade aging water transmission systems to increase pipeline capacity and reduce the risk of water outages. The priority also provides grants to develop future conservation programs, helps local schools fulfill state mandates for drinking water availability, and provides rebates on nitrate removal systems to improve water quality and safety for private well users.

Project A1 Completed (See Completed Projects, page 182)
Main Avenue and Madrone Pipelines Restoration

Project A2
Safe, Clean Water Partnerships and Grants

Project A3
Pipeline Reliability Project

Project A2

Safe, Clean Water Partnerships and Grants

Grants and partnerships covered under this project include:

- Grants for agencies and organizations to study and pilot-test new water conservation programs. In FY10, county water conservation stood at 50,600 acre-feet, but this number needs to nearly double by 2030 to meet future demand.
- Grants to help schools in the county provide drinking water dispensers and other potable water devices for students. California Senate Bill 1413 (SB 1413) requires that schools provide access to free, fresh drinking water during mealtimes in food service areas.
- Rebates to private well water users for the installation of point-of-use treatment systems to remove excess nitrate from their drinking water.

Benefits

- Helps Valley Water exceed the conservation goal of 98,500 acre-feet per year by 2030
- Reduces water demands and the need to invest in new or expanded water supply sources and associated infrastructure
- Increases water supply reliability
- Helps schools provide safe, clean drinking water to students and comply with state mandate
- Assists private well water users in maintaining the quality and safety of their drinking water

Key Performance Indicators (15-year Program)

1. Award up to $1 million to test new conservation activities.
2. Increase number of schools in Santa Clara County in compliance with SB 1413 and the Healthy Hunger-Free Kids Act, regarding access to drinking water by awarding 100% of eligible grant requests for the installation of hydration stations; a maximum of 250 grants up to $254,000.
3. Reduce number of private well water users exposed to nitrate above drinking water standards by awarding 100% of eligible rebate requests for the installation of nitrate removal systems; up to $30,000 for all rebates.

Geographic Area of Benefit: Countywide

Water to Go station at Fremont High School.

ON TARGET

Project A2 FY21 Highlights

- The Pilot Water Conservation Mini-Grant Program is completed.
- Awarded 100% of eligible nitrate treatment system rebate requests totaling $420 for one (1) nitrate removal system.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	MODIFIED
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- On February 11, 2020, the Board approved the development of a Pilot Water Conservation (Priority A2) Mini-Grant Program. The pilot mini-grant program designated a total amount not-to-exceed $100,000 for projects that meet A2 criteria to allow grantees to kick-start projects and gain data to support an application for future funding opportunities. Mini-grant applications were accepted on a rolling basis through December 31, 2020. Seven (7) applications for a total funding request of $34,995 were awarded.
- From FY14-20, 17 standard grant projects were awarded for a total of 706,132. Of these, 10 have been completed or closed. Four (4) were cancelled by grantee request.
- See Appendix C for a cumulative list of grants and partnerships awarded to date.

Progress on KPI #2: *(Completed in FY18)*

- This KPI was delivered in FY18.

Progress on KPI #3:

- In FY21, one rebate request for $420 was awarded to a private well user for the installation of one (1) nitrate removal system. The total amount awarded to date is $14,056.

Financial Information

Water Conservation Grant Program (KPI #1)

In FY21, 20% of the total annual project budget was expended.

The COVID-19 countywide guidance included a shelter-in-place order and other restrictions that impacted and delayed many grant projects, especially those interfacing with the public. The under-expenditure was due to CEQA compliance requirements and impacts from the COVID-19 public health orders, which resulted in staff and grantees experiencing delays in executing agreements for projects that were awarded funding, including A2 mini-grants. The grant funds that were budgeted for FY21 will be adjusted into FY22 to align with the agreements that need to be executed, per Board approval.

Nitrate Treatment System Rebate Program (KPI #3)

In FY21, 10% of the annual project budget was expended.

The under-expenditure was due to few rebates being requested. See the Opportunities and Challenges section for additional information about the modification to the funding allocation for KPI #3 and program sunset.

Financial Summary ($ Thousands)
A2. Safe, Clean Water Partnerships and Grants

Fiscal Year 2020–2021								15-year Program	
Project No. and Name	Adopted Budget	Budget Adjustements	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan*	% of Plan Spent
				Actual	Encumbrance	Total			
26061008 Water Conservation	$137	$77	$214	$42	$0	$42	20%	$1,219	57%
26062009 Hydration Stations	$0	$0	$0	$0	$0	$0	0%	$300	101%
26061010 Nitrate Treatment System Rebate	$4	$0	$4	$0*	$0	$0	10%	$231	55%
Total	**$141**	**$77**	**$218**	**$42**	**$0**	**$42**	**19%**	**$1,751**	**64%**

* A rebate of $420 was awarded.

Opportunities and Challenges

FY21 Safe, Clean Water Grant Program Audits and Improvements

The Board Audit Committee approved a desk audit of the grants program by an external auditor in FY20. The outcome of the desk audit was the recommendation for a subsequent performance audit for the grants program. In FY21, staff worked with the external auditor, subcontracted under TAP International, to identify streamlining opportunities and collect the IMC and Board's requested metrics. In early 2021, the auditor completed the full program audit and presented findings and recommendations to the Board Audit Committee and the entire Board for acceptance.

As a result of the audit and stakeholder feedback, the following improvements were implemented in FY21:

- Invoices are now reviewed within 10 days of receipt and paid out within 30 days of invoice approval.
- Staff tracks and monitors key administrative milestones, including application review status, agreement drafting and execution, invoicing, closeouts and outreach.
- Staff worked with internal stakeholders to develop standardized agreement templates for all grant types, retroactive start dates for projects, insurance waivers for low-risk mini-grant projects and electronic approval routing for agreement execution.

- Staff provides improved grantee guidance and assistance, including project and grant administration orientations for grantees; convenient meetings and coaching through online platforms like Zoom; 48-hour response time for email and telephone inquiries; and the use of DocuSign electronic signatures for agreements and invoices.
- Dashboards were created in the Fluxx Grants Management System (Fluxx) to streamline reviews for grant proposals, mini-grants, CEQA, and Valley Water permits.
- Staff conduct virtual grant workshops that are posted on the website as a resource for potential applicants
- Staff participated in grant training provided by recognized grant professional organizations, such as the National Grants Management Association (NGMA), PEAK Grantmaking and FluxxCon training through Fluxx.

As a result of the audit and stakeholder feedback, the following improvements are currently under development:

- Staff began developing a program policy and procedures manual, using Valley Water's QEMS guidelines and NGMA best practices to ensure program consistency, efficiency and compliance. In addition, manuals and online resources are being developed for grantees.
- In June 2021, a consultant launched a robust survey of current and past grantees. Results will help develop program procedures, improve grantee experience and redesign the grants and partnerships program under the renewed Safe, Clean Water Program to incorporate best practices and any other improvements.
- In November 2020, staff began planning and developing a redesigned Safe, Clean Water grants and partnerships program under Measure S. This plan includes a transition program for FY22. Staff was in the process of interviewing stakeholders, collecting lessons learned, and procuring a consultant to create the redesigned program. This program will incorporate audit recommendations such as grant criteria, right-sizing grant policies and procedures, risk analysis, best practices, new grant opportunities and process improvements.

Staffing

Past staffing issues resulted in a backlog of invoices, agreements, mini-grant applications and project closeouts. However, a permanent Senior Management Analyst position was filled in June 2020 and temporary staffing resources were dedicated to supporting the program, addressing the backlog and updating Fluxx records.

The audit and IMC recommended increased staffing levels to address the growing need for program-dedicated staffing to manage the increasing number of grant projects. On May 11, 2021, the Board approved two additional staff positions for the program. Recruitment began in June 2021.

COVID-19 Impacts to Safe, Clean Water Grants Program

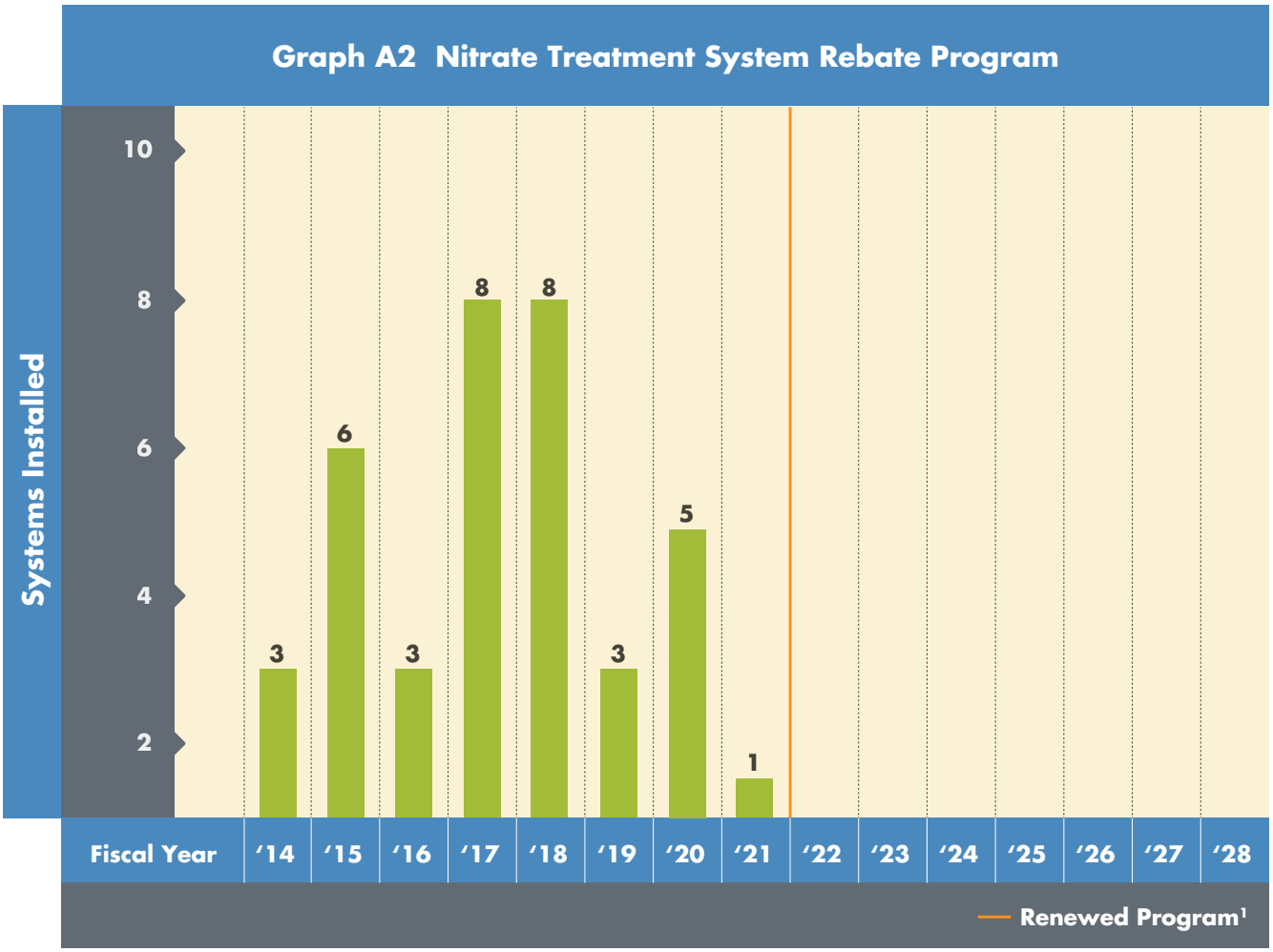
In March 2020, the Santa Clara County Public Health Officer issued countywide guidance to slow the spread of COVID-19 in our community. The countywide guidance included a shelter-in-place order and other restrictions, which impacted many grant projects, especially those interfacing with the public and involving work outdoors. Staff continued to support grantees in navigating project implementation during the pandemic in FY21. Grantees found creative ways to continue their project activities; however, many of the grantees could not perform many project tasks due to social distancing mandates in FY21.

Staff continues to receive and process several time-extension requests, schedule adjustment inquiries and delays to agreement executions due to the impacts of COVID-19. The Board approved longer agreement terms for FY21 grants to account for COVID-related delays. Staff will continue to monitor these projects and work with grantees to address these unforeseen changes.

Nitrate Treatment System Rebate Program

In February 2018, after years of monitoring outreach improvements, participation incentives and the resulting low participation levels for the Nitrate Treatment System Rebate Program, the IMC recommended a reduction in program funding to reflect the community demand. On May 23, 2018, in accordance with the Change Control Process, the Board approved a modification to KPI #3 for the Nitrate Treatment System Rebate Program to reduce funding, with an annual allocation of $4,000 for rebates through the project's 2023 completion date.

Due to low program participation, the Nitrate Treatment System Rebate Program was not included in the renewed Safe, Clean Water Program.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. Some aspects of this project are included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Plunger Valve at Main Avenue Ponds Vault.

ADJUSTED

Project A3 FY21 Highlights

- Completed designs for three (3) line valves.
- 60% design completed for the fourth valve.

Project A3

Pipeline Reliability Project

This project constructs 4 line valves at various locations along the East, West and Snell treated water pipelines in Saratoga, Cupertino and San José. This will allow Valley Water to isolate sections of pipelines for scheduled maintenance and repairs following a catastrophic event, such as a major earthquake.

Benefits

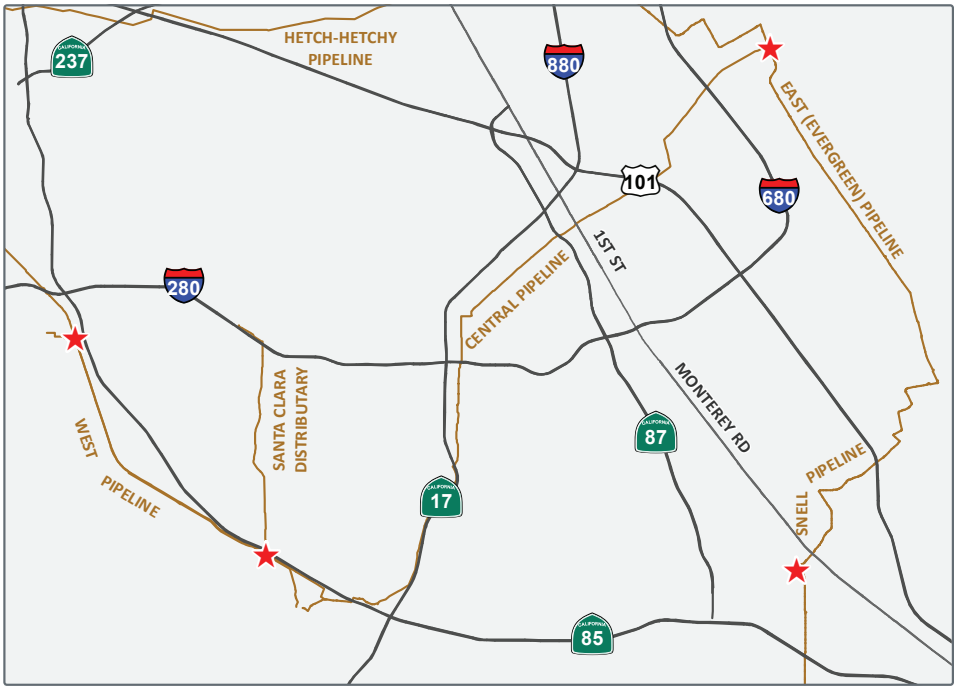
- Supports shorter service interruption in the case of a pipeline break
- Provides operational flexibility for pipeline maintenance work
- Improves drinking water reliability

Key Performance Indicator (15-year Program)

1. Install 4 new line valves on treated water distribution pipelines.

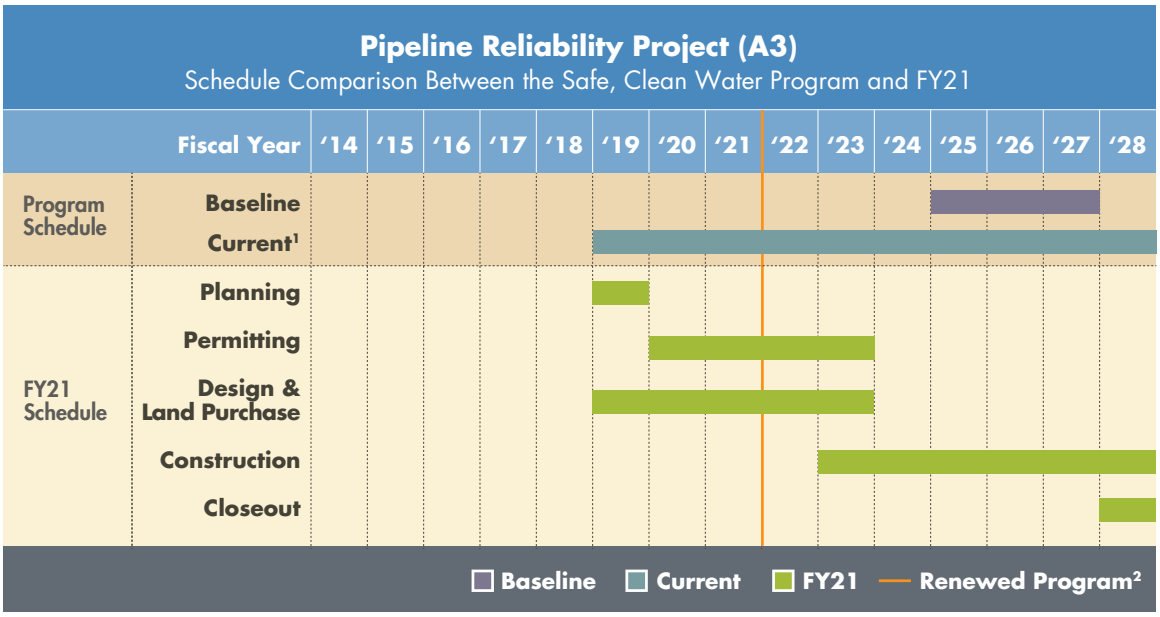
Geographic Area of Benefit: Mountain View, Sunnyvale, Santa Clara, Cupertino, Saratoga, Los Gatos, Los Altos, Campbell, San José and Milpitas

Project Location



★ Project Locations Santa Clara County

Schedule



[1] Board approved schedule adjustments through the change control process in FY17, FY20 & FY21.
[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	SCHEDULED TO START
FY 15	SCHEDULED TO START
FY 16	SCHEDULED TO START
FY 17	SCHEDULED TO START
FY 18	SCHEDULED TO START
FY 19	ON TARGET
FY 20	ADJUSTED

Status for FY21: ADJUSTED (Schedule Adjustment)

Progress on KPI #1:

- Project work was initiated in FY19. Planning has been completed for all four locations. Designs for three (3) of the line valves have been completed and the fourth line valve is at 60% for FY21. Final design completion for the fourth valve will be in FY22. Construction is scheduled for FY23 through FY28 in conjunction with the 10-Year Pipeline Inspection and Rehabilitation Program.

Financial Information

In FY21, 102% of the annual project budget was expended.

Financial Summary ($ Thousands) A3. Pipeline Reliability Project									
Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Bduget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$634	$538	$155	$1,327	$1,340	$17	$1,357	102%	$12,093	19%

Opportunities and Challenges

Schedule Adjustment

In FY21, the Board approved a schedule adjustment, extending the project completion date by two years to FY28. The project is incorporated into Valley Water's 10-Year Pipeline Inspection and Rehabilitation Program to ensure coordination with the long-term operations and maintenance pipeline shutdown schedule. The schedule adjustment was required due to updates to the Pipeline Inspection and Rehabilitation Program, developed with input from water retailers. The Board approved the schedule adjustment on May 11, 2021. As a result, the project is now scheduled to begin construction of the first valve in FY23 and complete the final valve in FY28.

Acquisition of Easements

Permanent easement acquisition may be required for the project. Line valves will be installed in existing Valley Water pipeline easements and/or public rights-of-way to the greatest extent possible.

Confidence levels

Schedule: Moderate Confidence

The installation of the valves will require the pipelines to be dewatered, which will take the pipeline out of service. The construction is coordinated with the long-term maintenance plan as well as other projects to minimize the disruption of water supply to the community. It is currently projected that construction will be completed in FY28 due to maintenance and other projects.

Funding: High Confidence

Funding from the Safe, Clean Water Program is expected to be sufficient to complete the project work.

Permits: Moderate Confidence

There has been no indication that permit acquisition will be challenging.

Jurisdictional Complexity: High Confidence

Coordination with the County of Santa Clara, City of San José, City of Saratoga and City of Cupertino has been initiated. There has been no indication that jurisdictional issues will be challenging.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

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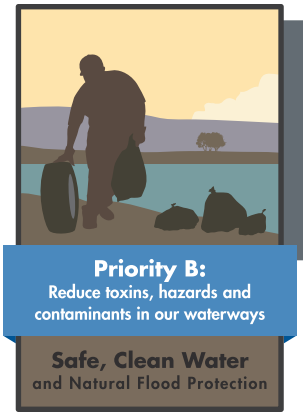


Priority B

Reduce Toxins, Hazards and Contaminants in our Waterways

Projects under Priority B use multiple strategies to reduce and remove contaminants in our local creeks, streams and bay. In addition to mercury treatment systems in our reservoirs, projects under this priority also prevent toxins from entering waterways by working with municipalities and other agencies to reduce runoff pollution. Valley Water also provides grants to reduce emerging contaminants and supports public education and volunteer cleanup efforts. Additional projects include coordinated cleanup of encampments near waterways, trash and graffiti removal, and rapid emergency response to hazardous materials spills.

Project B1
Impaired Water Bodies Improvement

Project B2
Interagency Urban Runoff Program

Project B3
Pollution Prevention Partnerships and Grants

Project B4
Good Neighbor Program: Encampment Cleanup

Project B5
Hazardous Materials Management and Response

Project B6
Good Neighbor Program: Remove Graffiti and Litter

Project B7
Support Volunteer Cleanup Efforts and Education

Water column sampling at Guadalupe Reservoir.

ON TARGET

Project B1 FY21 Highlights

- Operated and maintained existing oxygenation treatment systems in four (4) reservoirs (Almaden, Calero, Guadalupe, and Stevens Creek).
- The project also funds the operation of four (4) solar-powered circulators in Almaden Lake to improve oxygen concentration at the lake bottom.
- Implemented six (6) priority pollution prevention and reduction activities at 27 waterbodies, including 14 creeks and the Guadalupe River.
- Initiated the Reservoir Greenhouse Gas Emission Study under a collaborative agreement with the University of California, Davis.

Project B1

Impaired Water Bodies Improvement

This project helps Valley Water meet surface water quality standards and reduces pollutants in streams, groundwater, lakes and reservoirs. Efforts are carried out in compliance with the Regional Water Quality Control Board (RWQCB) Total Maximum Daily Loads (TMDLs) standards as they continue to evolve (TMDLs are the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards). Under this project, Valley Water employs treatment systems in reservoirs to reduce methylation of mercury, and also helps create realistic plans and expectations for reducing contaminant loads by engaging in the regulatory development process with the RWQCB for new and emerging contaminants.

Benefits

- Reduces contamination in creeks and reservoirs
- Improves water quality, including water going to drinking water treatment plants
- Reduces methylmercury in reservoirs to prevent its entry into the food web
- Improves ecosystem health by reducing mercury contamination in fish and other biota
- Supports regulatory compliance of TMDL standards affecting Valley Water operations

Key Performance Indicators (15-year Program)

1. Operate and maintain existing treatment systems in 4 reservoirs to remediate regulated contaminants, including mercury.
2. Prepare plan for the prioritization of pollution prevention and reduction activities.
3. Implement priority pollution prevention and reduction activities identified in the plan in 10 creeks.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- Operated and maintained existing oxygenation treatment systems in four (4) reservoirs (Almaden, Calero, Guadalupe and Stevens Creek) to reduce methylmercury production and improve water quality. Valley Water, which is subject to the Guadalupe River Watershed Mercury TMDL (Mercury TMDL), initiated voluntary methylmercury production and control studies in 2005 prior to its adoption.

Oxygenation System Operation

Hypolimnetic oxygenation systems are operated to prevent anaerobic (no-oxygen) conditions that occur during summer reservoir stratification. Stratification is a separation of the water into two (2) layers of differing temperature: the epilimnion (top layer) and the hypolimnion (bottom layer). During stratification, oxygen can be depleted in the hypolimnion. Under low-oxygen conditions, mercury can be converted to methylmercury, a highly toxic compound that accumulates in fish tissue and presents serious health risks to birds and people consuming fish.

The Mercury TMDL has water quality objectives for fish tissue and hypolimnion water methylmercury concentrations. For more information on the Mercury TMDL, please see the San Francisco Bay RWQCB website: ***tinyurl.com/GuadalupeMercuryTMDL***.

In the summer of 2020, the oxygenation systems at Guadalupe and Stevens Creek reservoirs operated nearly continuously throughout the stratification periods. Those at Almaden and Calero reservoirs had parts failures that took additional time to correct due to COVID-19 restrictions.

Although Stevens Creek Reservoir is located outside of the Guadalupe River Watershed, and therefore not subject to the Mercury TMDL, it also contains fish with mercury concentrations that exceed standards. Valley Water operates an oxygenation system at Stevens Creek Reservoir to reduce methylmercury production, improve downstream water quality and serve as a positive control site for comparison to the other three reservoirs.

During the summer of 2020, Valley Water used lower oxygen flow at the Stevens Creek oxygenation system to reduce impacts on turbidity and temperature while maintaining sufficient oxygenation to reduce methylmercury formation. While temperature changes within the reservoir overall are relatively small during oxygenation, the outlet temperature during those periods can increase by a couple of degrees Celsius. In June 2020, Valley Water began a one-year study to better understand the water quality effects of the oxygenation system on reservoir discharge, including downstream dissolved oxygen, turbidity, and temperature. Results of the study will allow staff to better manage the operation of the oxygenation system, if necessary, while maintaining sufficient oxygen levels. The study

was cut short in April 2021 due to the low reservoir water level and the need to preserve the limited cold water pool for downstream fish habitat. As a result, Valley Water will produce a data report instead of a complete interpretive report. Also, the resumption of the study will be evaluated in future years.

Operation of oxygenation systems in 2020:

- Almaden Reservoir – 8 weeks
- Calero Reservoir – 10 weeks
- Guadalupe Reservoir – 20 weeks
- Stevens Creek Reservoir – 16 weeks

Sampling the Guadalupe River for mercury during a storm.

The oxygenation systems were not deployed until May (Calero and Almaden) and June (Guadalupe and Stevens Creek) in 2020 due to the impacts of the COVID-19 pandemic, which slowed the availability of maintenance parts and services, especially for the Stevens Creek Reservoir unit, and delayed required maintenance on all units. In late June and early July 2020, the Almaden Reservoir system and Calero Reservoir system had electric or mechanical failures. Repairs to the Almaden Reservoir system were completed and the system restarted in mid-September. Repairs to the Calero Reservoir system were completed in June. All systems were shut down for the wet season in October 2020. In April 2021, the Almaden Reservoir System was turned on for the season until mechanical failure in May 2021. Repairs were completed in June 2021. Guadalupe and Stevens Creek reservoirs were both around 19% of capacity as of May 2021. Because line-diffuser oxygenation can warm bottom waters, especially under low water conditions, operation of the Guadalupe and Stevens Creek reservoir systems was delayed to support cold water (<16 °C) releases as long as possible. Oxygenation may begin later in summer 2021 if the cold-water pools are depleted.

Continuous specialized maintenance and troubleshooting are needed to keep the oxygenation systems operational. Major annual maintenance tasks were performed on the oxygen generators in April 2021, and additional maintenance has been performed since then. Damaged diffuser lines and anchors were replaced at Almaden and Calero reservoirs in June 2021. Valley Water staff continue regular weekly maintenance inspections of oxygenation units while they are operational.

Almaden Lake Solar-Powered Circulators

While not part of the KPI, this project also funds the operation of four (4) solar-powered circulators in Almaden Lake to improve oxygen concentration at the lake bottom. They have resulted in modest reductions in methylmercury in bottom water of the lake. After being serviced in May and June of 2020, all of the circulators have functioned normally throughout the year.

Progress Report on Methylmercury Control

Operation of the oxygenation systems resulted in a significant reduction in methylmercury in the hypolimnion (bottom of a reservoir), with an average decrease of up to 70% below historical summer concentrations. In most

cases, the methylmercury TMDL for the hypolimnia of reservoirs was met. However, no change was measured in the epilimnion (upper layer). Guadalupe and Stevens Creek reservoirs showed a trend of decreasing fish mercury, but concentrations remained well above targets. In Calero Reservoir, oxygenation also improves source water quality by increasing dissolved oxygen and reducing manganese and iron (which affect taste and odor), benefitting the Rinconada and Santa Teresa drinking water treatment plants.

Valley Water performs twice-monthly water quality monitoring at Almaden, Guadalupe, Calero, and Stevens Creek reservoirs, and Almaden Lake when the reservoirs and lake are stratified (monthly the rest of the year). Monitoring was suspended in April 2020 due to the COVID-19 pandemic. Regular monitoring resumed from October 2020 to Mid-December 2020, at which point it was again suspended in keeping with the statewide stay-at-home order. Monthly monitoring resumed in February 2021. Valley Water did not complete fish tissue sampling for 2020, because, unlike water sampling, safe social distancing could not be maintained while sampling. COVID-19 restrictions permitting, fish sampling will be done in 2021.

Valley Water staff worked with colleagues from RWQCB and UC Merced to author a technical paper on the effectiveness of the oxygenation system in reducing fish tissue mercury. The paper was published in the January 2021 issue of the *Environmental Pollution* journal, available at ***tinyurl.com/MercuryFishAlmaden***.

Key findings of the technical paper are:

- Reservoir oxygenation decreased methylmercury concentrations in the bottom water of all four reservoirs but did not lower the total mass of methylmercury. This suggests that methylmercury production was not inhibited by oxygenation.
- Oxygenation increased the growth of algae and cyanobacteria, likely due to increases in temperature and nutrient concentrations.
- Fish tissue mercury concentrations are declining in Guadalupe and Stevens Creek reservoirs. This could be due to biodilution in the food web as a result of increased algae growth.

The 2019 cover letter/progress report can be found at ***tinyurl.com/2019Methylmercury***.

Valley Water staff gave presentations on reservoir oxygenation and mercury remediation at the North American Lake Management Society annual conference (November 2020), the California Lake Management Society annual conference (October 2020), the California Aquatic Bioassessment Workgroup (October 2020), the Delta Tributaries Mercury Council (September 2020), UC Davis (April 2021), and at the Waste Management Symposium (March 2020). A recorded presentation covering reservoir oxygenation systems is available at ***https://www.youtube.com/watch?v=P5I3DTlFAuA***.

To study the transport of mercury through the food web, Valley Water collected suspended particulate matter and zooplankton from Almaden, Calero, Guadalupe and Stevens Creek reservoirs in October 2020. These samples will be analyzed for stable isotopes of nitrogen and carbon, total mercury, and methylmercury as part of Valley Water's reservoir mercury bioaccumulation study. Additional sampling occurred in June 2021. Samples will be analyzed in FY22. The study will be complete in FY22.

Progress on KPI #2: *(Completed in FY15)*

Valley Water drafted a Pollution Prevention Prioritization Plan in January of 2015. This plan is intended to prioritize 10 Santa Clara County waterbodies that would benefit most from pollution prevention projects. Focusing on

waterbodies listed as impaired on the Environmental Protection Agency's Clean Water Act section 303(d) list, Valley Water revised the plan in 2017. The updated plan includes a revised ranking methodology and recommendations for pollution prevention activities. The plan is currently being revised a third time to incorporate new information and regulatory changes. Because the 303(d) list is updated every two (2) years to include new data, emerging pollutants and de-listings, the plan is considered a "working document" and will be updated as regulatory priorities evolve. As a result, specific pollution prevention activities to be implemented as part of KPI #3 are not identified in the plan but are identified as part of annual reporting. Specific pollution prevention projects will be focused on addressing existing impairments in priority waterbodies.

Progress on KPI #3:

In FY21, Valley Water continued to implement six (6) priority pollution reduction activities in 27 waterbodies, including 14 creeks and the Guadalupe River. The following table shows the Pollution Prevention activities and applicable waterbodies.

B1 Priority Pollution Prevention and Reduction Activities	
Pollution Prevention Activity	**Waterbody[1]**
#1: Trash Accumulation Point Mapping and Removal	Guadalupe River
#2: Trash Reduction — Park Rangers and SJPD	Coyote Creek Guadalupe River
#3: Trash Accumulation Point Mapping and Removal	Coyote Creek
#4: Angler Survey	Almaden Reservoir Anderson Reservoir Calero Reservoir Camden Ponds Chesbro Reservoir Guadalupe Reservoir Lexington Reservoir Ogier Ponds[2] Stevens Creek Reservoir Uvas Reservoir Vasona Lake
#5: Homelessness Best Practices	Calabazas Creek Coyote Creek Guadalupe Creek Guadalupe River Llagas Creek Los Gatos Creek Lower Penitencia Creek Permanente Creek Ross Creek San Tomas Aquino Creek Saratoga Creek Silver Creek Stevens Creek Thompson Creek Uvas Creek
#6: Reservoir Greenhouse Gas Emission Study (new)	Chesbro Reservoir Stevens Creek Reservoir Uvas Reservoir
Total 6 Pollution Prevention Activities	**27 Waterbodies**

[1] "Waterbody" includes creeks, lakes and reservoirs.
[2] Ogier Ponds are owned by Santa Clara County.

Pollution Prevention Activity #1 & 3: Trash Accumulation Point Mapping and Removal

Guadalupe River

Valley Water began implementing the Pollution Prevention Priortization Plan in December 2015. The first pollution reduction activity in the plan was the mapping of trash accumulation locations in the Guadalupe River, from Highway 237 to Blossom Hill Road. The first Trash Accumulation Point Map was completed in FY16. Trash accumulation point mapping and removal is now part of a Memorandum of Agreement with the City of San José. Valley Water staff mapped and assessed trash accumulation points in the Guadalupe River in October 2020. In February 2021, six (6) cubic yards of trash were removed from Guadalupe River between Willow Street and Alma Avenue. In March 2021, 15 cubic yards of trash were removed from Guadalupe River downstream of Malone Road. Guadalupe River assessments are scheduled for summer 2021. During FY21, accumulation point mapping efforts were delayed due to COVID-19 shelter-in-place orders. (***www.valleywater.org/GuadalupeTrash2017***).

Coyote Creek

In January 2021, Valley Water removed 12 cubic yards of accumulated trash from Coyote Creek at Watson Park. Work orders in 2021 for Coyote Creek will continue into FY22. During FY21, Trash accumulation point mapping efforts on Coyote Creek were completed. In May 2021, Valley Water and City of San José staff resumed accumulation point assessments along Coyote Creek.

Pollution Prevention Activity #2: Trash Reduction - Park Rangers and San Jose Police Department (Guadalupe River and Coyote Creek)

This project funds patrol and enforcement services from the City of San José and California Department of Fish and Wildlife (CDFW) officers for proactive patrols along the Coyote Creek and Guadalupe River. Valley Water first executed an agreement with the San José Police Department in May 2019, which was extended in January 2020 for a total of $400,000 for 16 months of a Stream Stewardship Law Enforcement Program. In October of FY21, this agreement was extended for a total of $200,000. This program is critical to providing a safe environment for Valley Water personnel and volunteers to undertake stream stewardship activities and thereby discourage re-encampment. The extended agreement includes training for officers on environmental violations. Patrols were on hold as of March 2020 due to the COVID-19 pandemic and resumed in spring 2021.

An agreement with the CDFW for $70,000 was intended to assist in identifying debris sites, patrolling areas to prevent re-encampment, and conduct enforcement related to the Department's jurisdiction. Due to CDFW staffing shortages and the COVID-19 pandemic, few funds were expended in FY21. These services complement the encampment cleanups completed under the Project B4: Good Neighbor Program – Encampment Cleanup.

Pollution Prevention Activity #4: Angler Survey in mercury-impaired waterbodies

This study assessed fish consumption and human health risk in 13 mercury-impaired lakes and reservoirs and evaluated the effectiveness of existing consumption advisories, informing future consumption advisories and directing public outreach actions. The surveys, which were available in English, Spanish, Vietnamese, and Chinese, were carried out during the summers of 2017 and 2018. The final angler survey report was shared with the County of Santa Clara, who manages recreation at Valley Water reservoirs, and is posted at ***https://www.valleywater.org/project-updates/b1-impaired-water-bodies-improvement***.

Key findings include:

- 18% of anglers planned to eat their catch or give it to others. Most anglers who eat their catch feed it to children and women of child-bearing age.
- Anglers from zip codes with lower median incomes ate their catch more often.
- Anglers who were unaware of fish consumption advisories were more likely to consume their catch.
- Most anglers learned of fish consumption advisories through signage.

Recommended management actions included clarifying existing signage and posting additional signage, conducting additional outreach, and using new data to update advisories. The results of the Angler Survey are being incorporated in joint efforts with the County to update signage. A new law requires the County to post the Office of Environmental Health Hazard Fish Advisories at each reservoir.

Pollution Prevention Activity #5: Homelessness Best Practices

Valley Water continues to track and research best practices for preventing watershed pollution associated with homeless encampments. Valley Water previously collaborated with the City of San José to provide homeless residents with trash bags to contain their waste, primarily along Coyote Creek and Guadalupe River. This included purchasing 2,500 bags for distribution and conducting two bag pickup events. During FY21, trash bag pickups by Valley Water were no longer active. Bag pickup and distribution needs were serviced through the City of San Jose's Beautify San Jose initiative as part of their response to the COVID-19 pandemic. Staff is researching additional options for homelessness best practices to support clean waterways.

Pollution Prevention Activity #6: Reservoir Greenhouse Gas Emission Study

Valley Water entered a collaborative agreement with the University of California, Davis, to study greenhouse gas emissions from the surfaces of Chesbro, Stevens Creek, and Uvas Reservoirs. During this year-long study, researchers will quantify the seasonal and spatial variation of reservoir greenhouse gas fluxes. This information will be incorporated into Valley Water's Climate Change Action Plan to help achieve carbon neutrality. Findings may also be used to improve global climate models. Monthly 24-hour sampling is being conducted at Uvas Reservoir, and quarterly sampling is being conducted at the other reservoirs.

Financial Information

In FY21, 74% of the annual project budget was expended.

The underspending was due to the COVID-19 pandemic and shelter-in-place orders, which halted monitoring and studies that could not be completed while maintaining social distancing, including mercury monitoring and planned food web study monitoring and analysis.

Financial Summary ($ Thousands)
B1. Impaired Water Bodies Improvement

Fiscal Year 2020–2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$1,776	$41	$1,817	$1,118	$227	$1,345	74%	$27,427	38%

Opportunities and Challenges

Technical Studies on Methylmercury Control

Valley Water conducts technical studies to analyze the effectiveness of oxygenation to control methylmercury production and to better understand mercury cycling in the reservoirs. The COVID-19 pandemic paused the technical studies starting in April 2020. Due to the mercury sample method as well as the need to sample from a boat, close proximity between two staff is needed for sampling. Valley Water notified the RWQCB of the paused technical studies. Sampling resumed in October 2020 with staff following COVID-19 protocols.

Valley Water staff published a manuscript in January 2021 (Effects of Hypolimnetic Oxygenation on Mercury Cycling and Bioaccumulation in Reservoirs near the New Almaden Mining District, California, USA) in the journal *Environmental Pollution*. Coauthors include staff from Valley Water, UC Merced, and the RWQCB. The published journal can be found at ***tinyurl.com/MercuryFishAlmaden***.

In May 2019, Valley Water entered into a partnership agreement with the United States Geological Survey (USGS) to study water column mercury methylation in the four reservoirs (Almaden, Calero, Guadalupe, and Stevens Creek). Emerging research suggests that the water columns of reservoirs, in addition to the sediment-water interface, may be important locations of methylmercury production and bioaccumulation. Field sampling and experiments occurred in May and August 2019. The data produced for this project is here: ***https://doi.org/10.5066/P9N7LEER***.

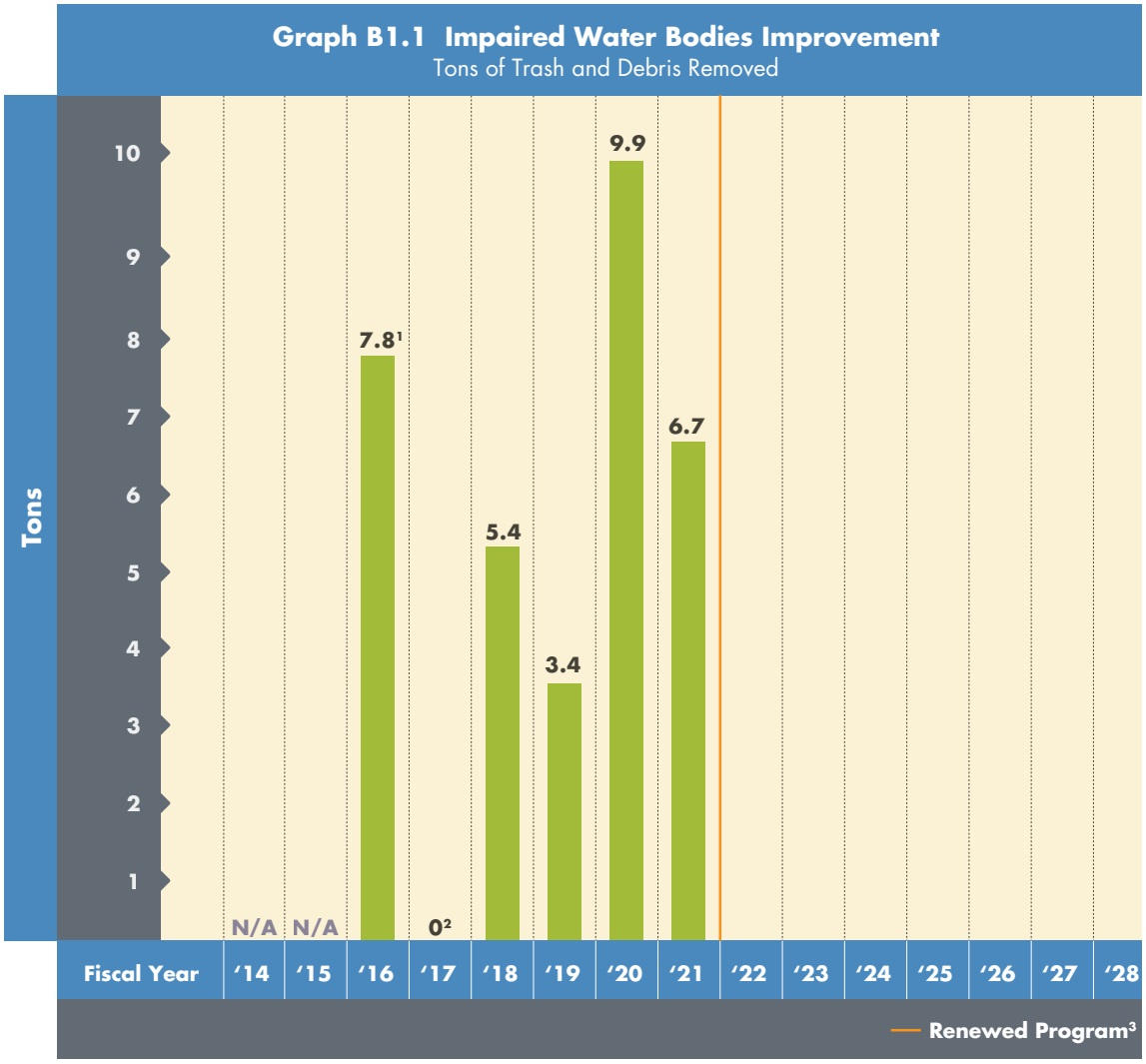
UC Merced received a research grant from the Department of Energy to study treatment methods that may be employed to reduce methylmercury production in contaminated sediments such as those in Guadalupe Reservoir. Valley Water supported this effort by facilitating field data collection events with university researchers. A manuscript detailing findings is currently in progress.

The findings of Valley Water's technical studies will inform the implementation plan of the upcoming Statewide Mercury Program for Reservoirs currently under development by the State Water Resources Control Board. Valley Water actively participates in the statewide effort.

Coordinated Mercury TMDL Monitoring Program and Partnerships

In addition to reservoir monitoring, the Guadalupe River Watershed Mercury TMDL requires coordinated monitoring of fish in creeks and mercury loads to the San Francisco Bay by mine site and reservoir owners. Valley Water coordinated with project partners (County of Santa Clara, Midpeninsula Regional Open Space District, and Guadalupe Rubbish Disposal Company) to plan the second 5-year phase of the Coordinated Monitoring

Program for the Guadalupe River Watershed Mercury TMDL project. A 5-year monitoring report was submitted to the RWQCB in January 2017 (***tinyurl.com/GuadCMP5Yr***). The partners are primarily responsible for source control and implementing projects to remediate mercury-contaminated sites upstream of the reservoirs in the historical Almaden Mining District.



[1] This estimate may have varied slightly from past annual reports due to a refinement of the conversion from cubic yards to tons.

[2] Due to high flows during the winter of FY17, re-mapping was delayed and conducted in May and June 2017. The 0.2 tons of trash identified as part of this mapping effort was cleaned in FY18.

[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Valley Water led the development of a cost-share agreement to fund a consultant to develop and implement a plan to meet the mercury monitoring requirements. The consultants prepared a sampling plan that was reviewed by all partners and approved by the RWQCB in October 2018. The sampling plan and approval letter can be found at ***https://www.valleywater.org/project-updates/b1-impaired-water-bodies-improvement***. The consultants

sampled two large February storms to estimate mercury loading in FY18. In addition, the consultants sampled fish tissue mercury in creeks and Lake Almaden. A progress report was submitted to the RWQCB in March 2020 and can be found at ***www.valleywater.org/GuadalupeMonitoringReport2018-19***.

Pollution Prevention Partnership Opportunities

Valley Water continues to explore partnerships with cities, non-profits, and volunteer groups to implement priority pollution prevention and reduction activities in 10 water bodies throughout the county. This includes:

- Working with the City of San José on trash in Guadalupe River and Coyote Creek.
- Collaboration with the RWQCB and mercury researchers, as well as presenting mercury findings at various conferences.
- Partnership with USGS and UC Merced on mercury studies.
- Coordinated Monitoring Program for Guadalupe River mercury monitoring.
- Active participation in the California Lake Management Society.
- In addition, the project is coordinated with the ongoing Guadalupe and Calero dam seismic retrofit projects to protect and improve reservoir water quality.

Operational and Maintenance Challenges

Operating the oxygenation systems consistently can be a challenge due to maintenance issues. As mentioned earlier, the systems require specialized maintenance by original vendors.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Project B2

Interagency Urban Runoff Program

This project supports Valley Water's continued participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and South County programs that help Valley Water reduce stormwater pollution and meet regulatory requirements to reduce contaminants in surface water.

Valley Water also participates in the regulatory development process related to stormwater by providing review, analysis and commentary on various basin plan amendments, Total Maximum Daily Loads (TMDLs) and water bodies listed as impaired or threatened under the federal Clean Water Act. Project B2 also allows Valley Water to maintain regional public education and outreach activities to help prevent urban runoff pollution at the source.

Benefits

- Uses partnerships with municipalities and local agencies to reduce contaminants and improve surface water quality in our streams, reservoirs, lakes and wetlands
- Maintains Valley Water compliance with the Regional Water Quality Control Board and National Pollutant Discharge Elimination System (NPDES) permits
- Allows continued participation in SCVURPPP and South County urban runoff programs
- Promotes stormwater pollution prevention through public outreach

Key Performance Indicators (15-year Program)

1. Install at least 2 and operate 4 trash capture devices at stormwater outfalls in Santa Clara County.
2. Maintain partnerships with cities and County to address surface water quality improvements.
3. Support 5 pollution prevention activities to improve surface water quality in Santa Clara County, either independently or collaboratively with South County organizations.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Trash boom cleaning at Thompson Creek.

ON TARGET

Project B2 FY21 Highlights

- Operated four (4) trash capture devices (booms) in the county, which collected approximately 0.2 tons of trash.
- Maintained several partnerships with all cities and the county.
- Completed two (2) and in process for two (2) pollution prevention activities in South County.

Status for FY21: ON TARGET

Progress on KPI #1:

In FY21, a total of four (4) trash capture devices (booms) were operated in Santa Clara County. Approximately two (2) cubic yards (0.2 tons) of trash were collected and removed (Figure B2.1). Due to low flows and drought conditions during FY21, trash accumulated upstream of the trash boom on Thompson Creek and was cleaned as part of trash hot spot cleanups. Low flows and drought conditions also contributed to reduced levels of trash in the Lower Silver Creek boom compared to previous fiscal years.

The four (4) booms were located at:

- Lower Silver Creek near King Rd. and Schulte Dr., San José
- Matadero Creek at West Bayshore Rd., Palo Alto
- Adobe Creek at East Bayshore Rd., Palo Alto
- Thompson Creek upstream of Tully Rd., San José

The Matadero and Adobe creek booms are managed by the City of Palo Alto under an agreement with Valley Water, which obtained environmental permits. Per the agreement, the two (2) booms in Palo Alto are removed each year between December and April, while the booms in San José are typically left in the creeks all year. Valley Water inspects all booms regularly.

In addition to booms, the stormwater NPDES permit requires Valley Water to clean up designated "hot spots." Under Project B2, 12 hot spots were cleaned during the year, removing 17 cubic yards (1.7 tons) of trash. In June 2020, the Bay Area Stormwater Management Agencies Association released the final report on receiving water trash monitoring, including data collected from some of Valley Water's trash hot spot sites. The report summarizes findings from qualitative and quantitative trash monitoring protocols used throughout the Bay Area. The final report was submitted to the San Francisco Bay Regional Water Board and is available at ***tinyurl.com/TrashJune2020***.

Progress on KPI #2:

Maintained several partnerships with cities and Santa Clara County.

- Valley Water is an active member of SCVURPPP. SCVURPPP is a partnership with Santa Clara County and 13 cities within the county to reduce pollution in urban runoff to the "maximum extent practicable" to improve the water quality of South San Francisco Bay and the streams of Santa Clara County. Below is more information about SCVURPPP partnership activities:
    - Valley Water's contribution to the SCVURPPP budget is 30%, and Valley Water chairs the management committee. More information can be found at ***http://scvurppp.org/***.
    - Information on the SCVURPPP regional outreach program can be found at ***http://www.mywatershedwatch.org/***.
    - Work conducted in FY21 includes continued implementation of the requirements of the San Francisco

Bay Municipal Regional Stormwater Permit (MRP) (see ***tinyurl.com/MRP2015Nov***) and support of Green Stormwater Infrastructure implementation as part of the approved Stormwater Resource Plan (see ***https://scvurppp.org/swrp/***). A SCVURPPP 2020 Program Summary will be posted at ***https://scvurppp.org/library/***.

- SCVURPPP, municipalities and Valley Water submit annual reports to the San Francisco Bay Regional Water Quality Control Board (RWQCB) with accomplishments on the required activities. Valley Water's latest annual report can be found here: ***tinyurl.com/MRPAnnualReportFY20***
- Permittees, including Valley Water, are currently working with the RWQCB on planning for the re-issuance of the MRP. The current MRP expired at the end of 2020 but was administratively extended to allow additional time for the development of the reissued permit, which is currently expected to become effective July 1, 2022.

- From May 2019- December 2020, Valley Water staff represented SCVURPPP on the Bay Area Stormwater Management Agencies Association (BASMAA) Board of Directors. More information on BASMAA can be found at ***http://basmaa.org/***.
- Valley Water staff served on the California Stormwater Quality Association (CASQA) Board of Directors until December 2020. For more information on CASQA, visit ***https://www.casqa.org/***
- Valley Water continues to participate in the Santa Clara County Technical Advisory Committee (TAC) to the Recycling and Waste Reduction Commission (RWRC). The TAC works on various relevant issues, including waste and litter reduction, outreach, green business and reducing disposables. Under Project B3: Pollution Prevention Partnerships and Grants, Valley Water has supported the County of Santa Clara's Green Business Program, which is reviewed by the RWRC TAC. SCVURPPP and the RWRC are co-funding waste and litter reduction outreach efforts. In addition, Valley Water actively participates in the Eco-Gardeners committee, jointly funded by the Recycling and Waste Reduction Committee and SCVURPPP, with a goal of promoting native, drought-tolerant landscaping, reducing the use of pesticides and encouraging composting.
- Valley Water actively participates and shares data, reports, and findings with the South County stormwater group, comprised of Morgan Hill, Gilroy and the County of Santa Clara.

Progress on KPI #3:

In FY21, Pollution Prevention Activity #2 was still in process, while Pollution Prevention Activity #3 was completed for a total of three (3) pollution prevention activities in South County. Pollution Prevention Activity #1 was completed in FY19. The Pollution Prevention Prioritization Plan that was completed and updated under Project B1: Impaired Water Bodies Improvement (KPI #2) is also being used to prioritize projects for Project B2 with a focus on South County.

- Pollution Prevention Activity #1 (completed): Worked with Gilroy, Morgan Hill, and the County

Typical Bioretention Design Green Infrastructure (Image Credit: SCVURPPP).

to complete the South County Pajaro River Watershed Pathogen and Microbial Source Tracking Study (***tinyurl.com/PajaroFIB2017***). Valley Water finalized the report in FY17. This study resulted in further monitoring of pathogen sources by South County agencies with additional investment by Valley Water in FY18. This activity has resulted in information that other agencies are using to develop pollution prevention outreach. A summary of the study was developed and can be found at ***tinyurl.com/PajaroFIB2018***.

- Pollution Prevention Activity #2 (in progress): Valley Water performed data analysis for South County nutrient impairment and TMDL for the Pajaro River watershed to prioritize agricultural parcels based on predicted nitrate, precipitation, soil erosivity, slope and area. The analysis was presented to the South County stormwater group. Valley Water is currently developing the next steps to reduce nutrient loading in the Uvas/Llagas Watershed. Valley Water staff is tracking the regulatory requirements for agricultural discharges of nutrients and pesticides.
- Pollution Prevention Activity #3 (completed): Valley Water developed a Storm Water Resource Plan (SWRP) in collaboration with stormwater permittees in South County (Gilroy, Morgan Hill and County of Santa Clara) to identify and prioritize Green Stormwater Infrastructure (GSI) opportunities that could be eligible for funding. Similar to the SCVURPPP effort, this SWRP is a planning document that uses a data-mapping approach to identify and prioritize local and regional GSI projects that can be implemented to improve local surface water quality through enhanced stormwater management. GSI reduces the quantity and improves the quality of water flowing into our creeks while also providing other possible benefits, including groundwater infiltration, flood attenuation, aesthetics, reduction in heat islands and other community benefits.
- Pollution Prevention Activity #4 (in progress): South County Pet Waste Outreach Project Valley Water identified pet waste as a source of bacteria in local South County Creeks. Valley Water assisted Morgan Hill, Gilroy, and the County with the production of mailers and signage for their pet waste outreach project. Signs were installed in selected areas with pet waste issues in spring 2021. The signs and mailers will provide information on the environmental impacts of improper disposal of pet waste and a link for a survey and pledge. Results of the survey will be shared with Valley Water.

Financial Information

In FY21, 82% of the annual project budget was expended. The underspending was primarily due to less labor expended on this project as a result of staffing changes.

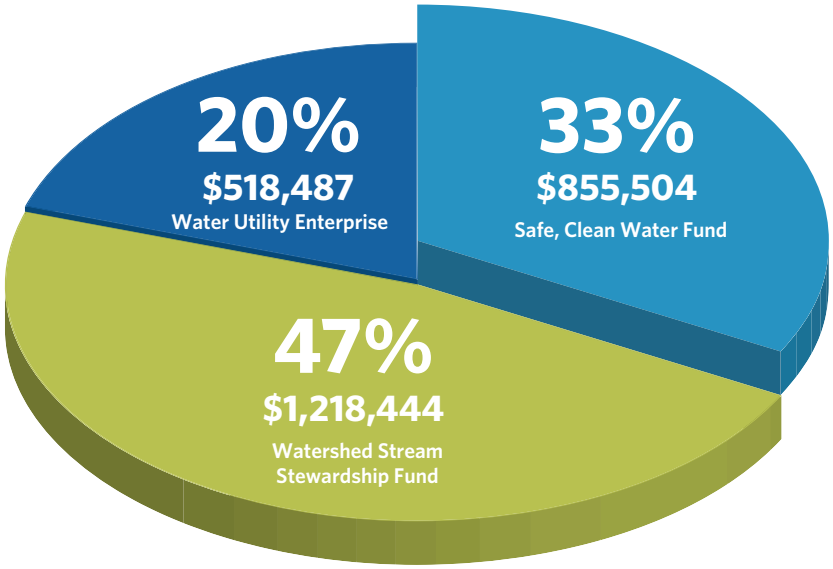
Financial Summary ($ Thousands)
B2. Interagency Urban Runoff Program

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustment	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$856	$0	$856	$702	$0	$702	82%	$12,641	43%

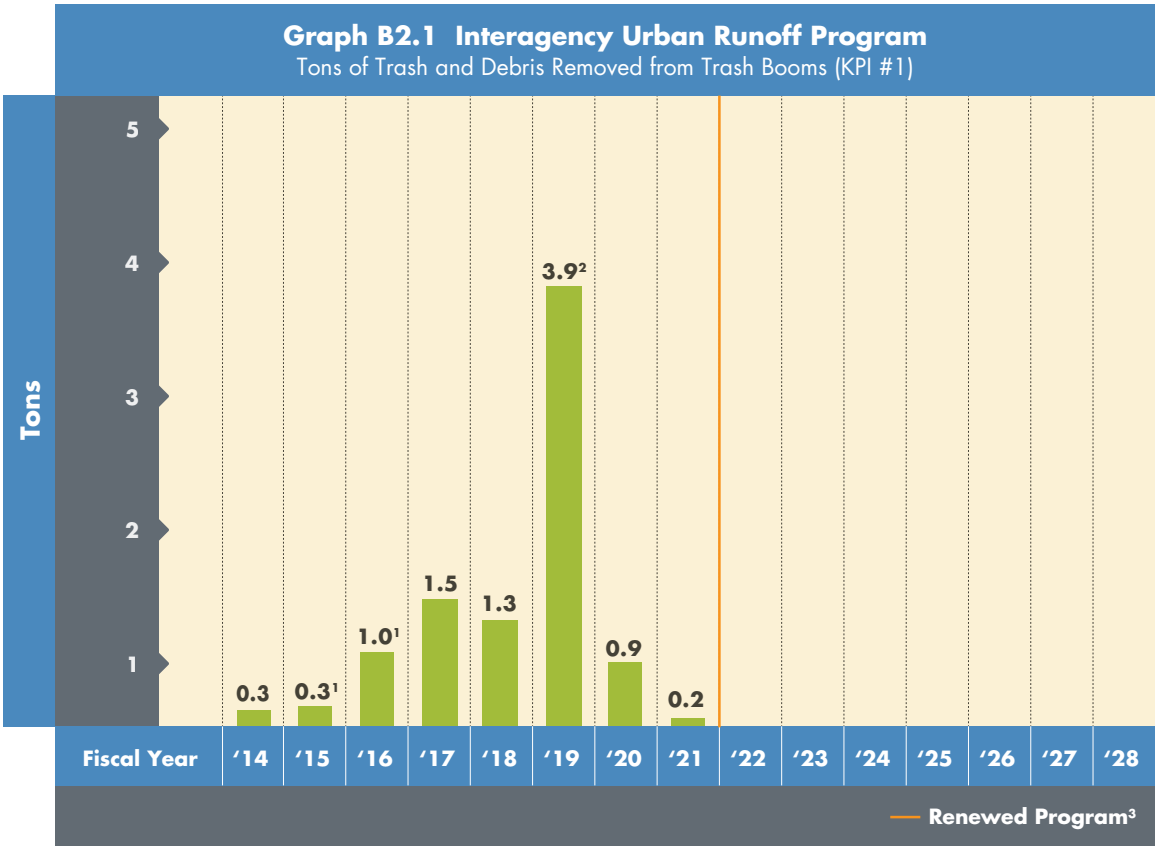
Figure B2.2

B2 Interagency Urban Runoff Program

Total FY21 Project Budget: $2,592,435



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure B2.2 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.



[1] This estimate may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons.

[2] The FY19 increase is likely due to more frequent boom cleaning, necessitated by more frequent rainfall.

[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Opportunities and Challenges

Trash Capture

Opportunities exist for the use of booms at additional creek locations to help capture trash during Project B1 trash mapping and cleanup activities. Trash booms require environmental permitting and may not be appropriate for all creek locations. In addition, a new Municipal Regional Stormwater Permit is being developed by the RWQCB that may affect future strategies for trash capture. Valley Water provided lessons learned information on booms to SCVURPPP and BASMAA partners and presented on booms at the 2019 CASQA conference.

Trash Prevention

Through collaboration with cities as part of SCVURPPP, the Zero Litter Initiative and the RWRC TAC, Valley Water works on preventing trash through education and outreach. Valley Water's outreach and school education programs also address reducing litter and waste.

Homelessness

Encampments in creeks are increasing and contributing significant amounts of trash to urban creeks. Several of the Priority B projects are related to the clean up of trash and encampments. Valley Water meets regularly internally as well as with the City of San José to coordinate resources and cleanup efforts.

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup were very high, although volunteer activities were impacted by the COVID-19 pandemic. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6 and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects continued to optimize the use of the various funding sources. A factsheet was compiled in FY20 showing the amount and type of litter removed during creek cleanups (***tinyurl.com/CleanupsFY20***). For additional information on the volunteer program, please see Project B7.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Project B3

Pollution Prevention Partnerships and Grants

This project provides pollution prevention grants to qualified local agencies, nonprofit groups, schools, etc., totaling an average of $500,000 per cycle. In addition, up to $200,000 per year goes toward partnerships with municipalities for specific programs to reduce contaminants in surface or groundwater, and reduce emerging contaminants.

Grants could support programs such as public education to prevent pharmaceuticals from entering waterways, technical assistance to help growers protect groundwater, and partnerships to reduce litter and graffiti.

Benefits

- Helps prevent contaminants such as pharmaceuticals, household hazardous waste and trash from entering our waterways
- Helps meet regulatory requirements as listed under the impaired water bodies listing of the federal Clean Water Act
- Reduces contaminant source loads in groundwater and surface water, and protects local watersheds
- Provides public education to reduce contaminants in our waterways
- Leverages community resources for efficient use of funds

Key Performance Indicator (15-year Program)

1. Provide 7 grant cycles and 5 partnerships that follow pre-established competitive criteria related to preventing or removing pollution.

Geographic Area of Benefit: Countywide

S.F. Bay Wildlife Society cleanup event.

ON TARGET

Project B3 FY21 Highlights

- A partnership agreement for $180,000 was executed with the City of San José for the Cash for Trash Project.
- Closed one (1) partnership with the City of San José for the Pollution Project Prevention and Creeks Cleanup.
- Continued administering 14 open grants and partnerships.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

FY21 was not a grant cycle year for Project B3.

A partnership agreement for $180,000 was executed with the City of San José for the Cash for Trash Project.

- From FY14-20, 21 grant projects and five (5) partnerships were awarded for a total of $3,288,251. Eleven (11) have been completed or closed. One (1) was cancelled per grantee's request.
- See Appendix C for a cumulative list of grants and partnerships awarded to date.

Financial Information

In FY21, 58% of the annual project budget was expended.

The COVID-19 countywide guidance included a shelter-in-place order and other restrictions that impacted and delayed many grant projects, especially those interfacing with the public. The under-expenditure was due to delays in executing grant agreements. Due to CEQA compliance requirements and impacts from the COVID-19 public health orders, staff and grantees experienced delays in executing agreements for projects that were awarded funding. The grant funds that were budgeted for FY21 will be adjusted into FY22 to align with the agreements that need to be executed, per Board approval.

Financial Summary ($ Thousands)
B3. Pollution Prevention Partnerships and Grants

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$356	$435	$791	$227	$235	$462	58%	$7,350	52%

Opportunities and Challenges

FY21 Safe, Clean Water Grant Program Audits and Improvements

The Board Audit Committee approved a desk audit of the grants program by an external auditor in FY20. The outcome of the desk audit was the recommendation for a subsequent performance audit for the grants program. In FY21, staff worked with the external auditor, subcontracted under TAP International, to identify streamlining opportunities and collect the IMC and Board's requested metrics. In early 2021, the auditor completed the full program audit and presented findings and recommendations to the Board Audit Committee and the entire Board for acceptance.

As a result of the audit and stakeholder feedback, the following improvements were implemented in FY21:

- Invoices are now reviewed within 10 days of receipt and paid out within 30 days of invoice approval.
- Staff tracks and monitors key administrative milestones, including application review status, agreement drafting and execution, invoicing, closeouts and outreach.
- Staff worked with internal stakeholders to develop standardized agreement templates for all grant types, retroactive start dates for projects, insurance waivers for low-risk mini-grant projects and electronic approval routing for agreement execution.
- Staff provides improved grantee guidance and assistance, including project and grant administration orientations for grantees; convenient meetings and coaching through online platforms like Zoom; 48-hour response time for email and telephone inquiries; and the use of DocuSign electronic signatures for agreements and invoices.
- Dashboards were created in the Fluxx Grants Management System (Fluxx) to streamline reviews for grant proposals, mini-grants, CEQA and Valley Water permits.
- Staff conduct virtual grant workshops that are posted on the website as a resource for potential applicants.
- Staff participated in grant training provided by recognized grant professional organizations, such as the National Grants Management Association (NGMA), PEAK Grantmaking and FluxxCon training through Fluxx.

As a result of the audit and stakeholder feedback, the following improvements are currently under development:

- Staff began developing a program policy and procedures manual, using Valley Water's QEMS guidelines and NGMA best practices to ensure program consistency, efficiency and compliance. In addition, manuals and online resources are being developed for grantees.
- In June 2021, a consultant launched a robust survey of current and past grantees. Results will help develop program procedures, improve grantee experience, and redesign the grants and partnerships program under the renewed Safe, Clean Water Program to incorporate best practices and any other improvements.

- In November 2020, Valley Water staff began planning and developing a redesigned Safe, Clean Water grants and partnerships program under the renewed program. This plan includes a transition program for FY22. Staff was interviewing stakeholders, collecting lessons learned, and procuring a consultant to create the redesigned program. This program will incorporate audit recommendations such as grant criteria, right-sizing grant policies and procedures, risk analysis, best practices, new grant opportunities and process improvements.

Staffing

Past staffing issues resulted in a backlog of invoices, agreements, mini-grant applications, and project closeouts. However, a permanent Senior Management Analyst position was filled in June 2020 and temporary staffing resources were dedicated to supporting the program, addressing the backlog, and updating Fluxx records.

The audit and IMC recommended increased staffing levels to address the growing need for program-dedicated staffing to manage the increasing number of grant projects. On May 11, 2021, the Board approved two additional staff positions for the program. Recruitment began in June 2021.

COVID-19 Impacts to Safe, Clean Water Grants Program

In March 2020, the Santa Clara County Public Health Officer issued countywide guidance to slow the spread of COVID-19 in our community. The countywide guidance included a shelter-in-place order and other restrictions, which impacted many grant projects, especially those interfacing with the public and involving work outdoors. Staff continued to support grantees in navigating project implementation during the pandemic in FY21. Grantees found creative ways to continue their project activities; however, many of the grantees could not perform many project tasks due to social distancing mandates in FY21.

Staff continues to receive and process several time-extension requests, schedule adjustment inquiries and delays to agreement executions due to the impacts of COVID-19. The Board approved longer agreement terms for FY21 grants to account for COVID-related delays. Staff will continue to monitor these projects and work with grantees to address these unforeseen changes.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Project B4

Good Neighbor Program: Encampment Cleanup

This project supports Valley Water's ongoing coordination with local cities and agencies to clean up creekside encampments that contaminate waterways and damage Valley Water facilities. This cooperative effort includes local police departments, social services, and nonprofit advocacy groups that help provide alternatives to homelessness.

Benefits

- Reduces trash and other pollutant loads in surface water, including streams, reservoirs and wetlands
- Improves the aesthetics of creeks in neighborhoods and parks
- Coordinates efforts among multiple agencies to create lasting solutions

Key Performance Indicator (15-year Program)

1. Perform 52 annual cleanups for the duration of the Safe, Clean Water Program to reduce the amount of trash and pollutants entering the streams.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: NOT ON TARGET

Progress on KPI #1:

- In FY21, 28 encampment sites were cleaned (Graph B4.1) and 109 tons of trash and debris generated from encampments were removed (Graph B4.2).

Homeless encampment along Coyote Creek in San José.

NOT ON TARGET

Project B4 FY21 Highlights

- Cleanups were severely curtailed because of COVID-19 related restrictions concerning unhoused encampments.
- Cleaned 28 encampment sites and removed 109 tons of trash and debris from encampments.
- Participated in the Joint Trash Team along with the City of San José and other partner agencies on a monthly basis.

Cleanups were severely curtailed during the year because of the many COVID-19 related restrictions concerning unhoused encampments. In keeping with the Center for Disease Control (CDC) guidance, Valley Water suspended encampment abatements until mid-March 2021, except for in instances of particular encampments obstructing Valley Water's planned work or negatively impacting its ability to meet regulatory or other legal obligations.

However, Valley Water continued to perform cleanups adjacent to homeless encampments to reduce the amount of trash and debris in local waterways and these activities were funded through Project B6: Good Neighbor Program: Remove Graffiti and Litter.

While Valley Water provides encampment cleanup support on Valley Water and local municipal agencies' properties throughout the county, most of these cleanups were performed in coordination with the City of San José as part of an ongoing agreement to complete encampment cleanup activities along the creeks. In addition, Valley Water participated in the Joint Trash Team along with the City of San José and other partner agencies on a monthly basis to plan and schedule services that are required for cleanup events, such as social services, law enforcement and volunteer support.

Financial Information

In FY21, 40% of the annual project budget was expended.

The under-expenditure was because encampment abatement activities remained suspended for most of the fiscal year due to COVID-19.

Financial Summary ($ Thousands)
B4. Good Neighbor Program: Encampment Cleanup

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$922	$0	$922	$365	$0	$365	40%	$15,679	50%

Opportunities and Challenges

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup was high, although the pandemic impacted volunteer activities. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6, and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects continued to optimize the use of the various funding sources. For additional information on the volunteer program, please see Project B7.

Homelessness in Santa Clara County

On May 25, 2021, the Valley Water Board endorsed the Santa Clara County Community Plan to End Homelessness 2020-2025, the countywide plan that serves as a roadmap for addressing homelessness in the county. The community plan is organized around three main strategies: 1) Address the root causes of

homelessness through system and policy change; 2) Expand homelessness prevention and housing programs to meet the need; and 3) Improve the quality of life for unsheltered individuals and create healthy neighborhoods for all.

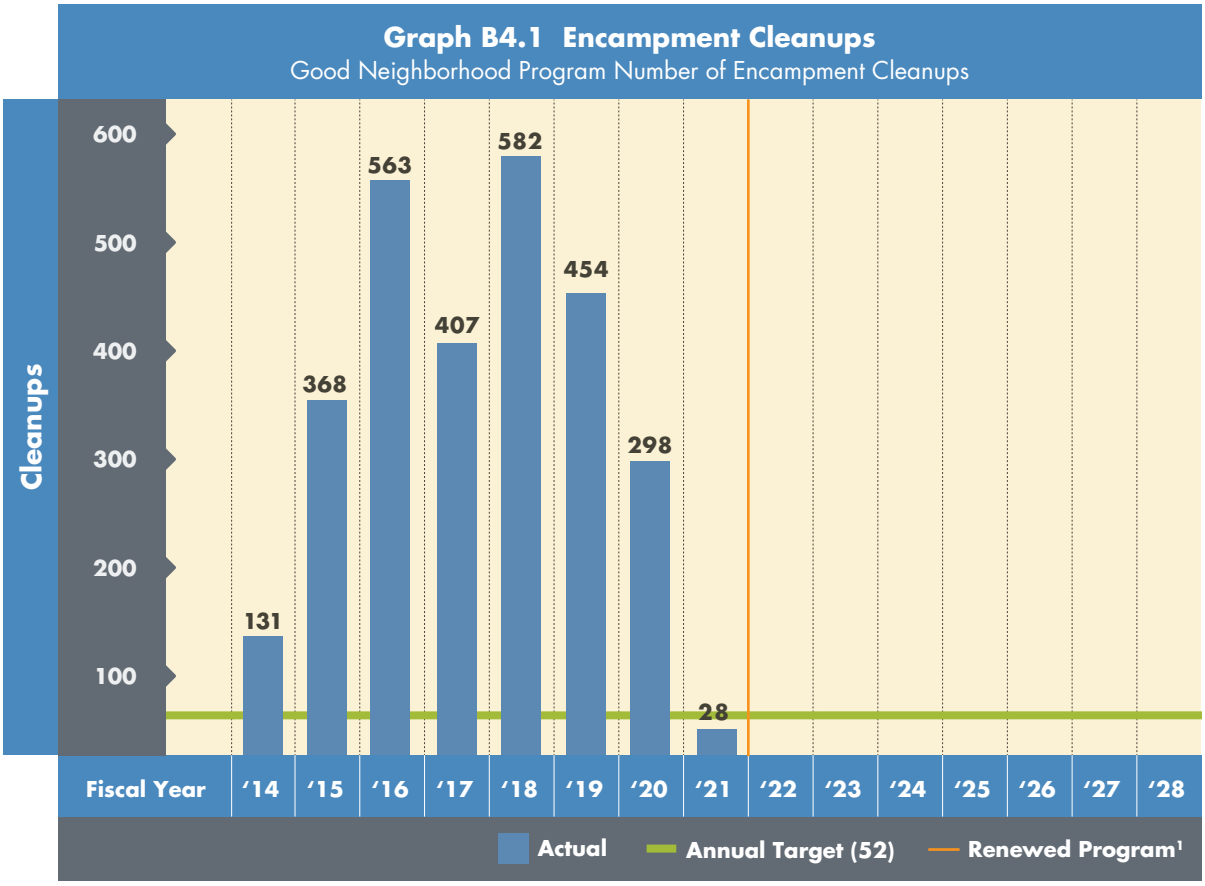
COVID-19 Impacts

Under the state and county's shelter-in-place order to slow the spread of COVID-19, Valley Water is considered critical and essential as an organization from a utility and public works perspective. Essential work includes those activities and processes necessary to ensure public safety; to align with Valley Water's charter to provide safe, clean water, flood protection and environmental stewardship; to ensure the viability of the agency; and work that, if not performed, would have a significant impact to the community. Following the evolving CDC guidance regarding homeless encampment abatements during the pandemic, local agencies, including Valley Water, ceased encampment abatements until mid-March 2021. As a result, the total number of cleanups during the year was significantly reduced.

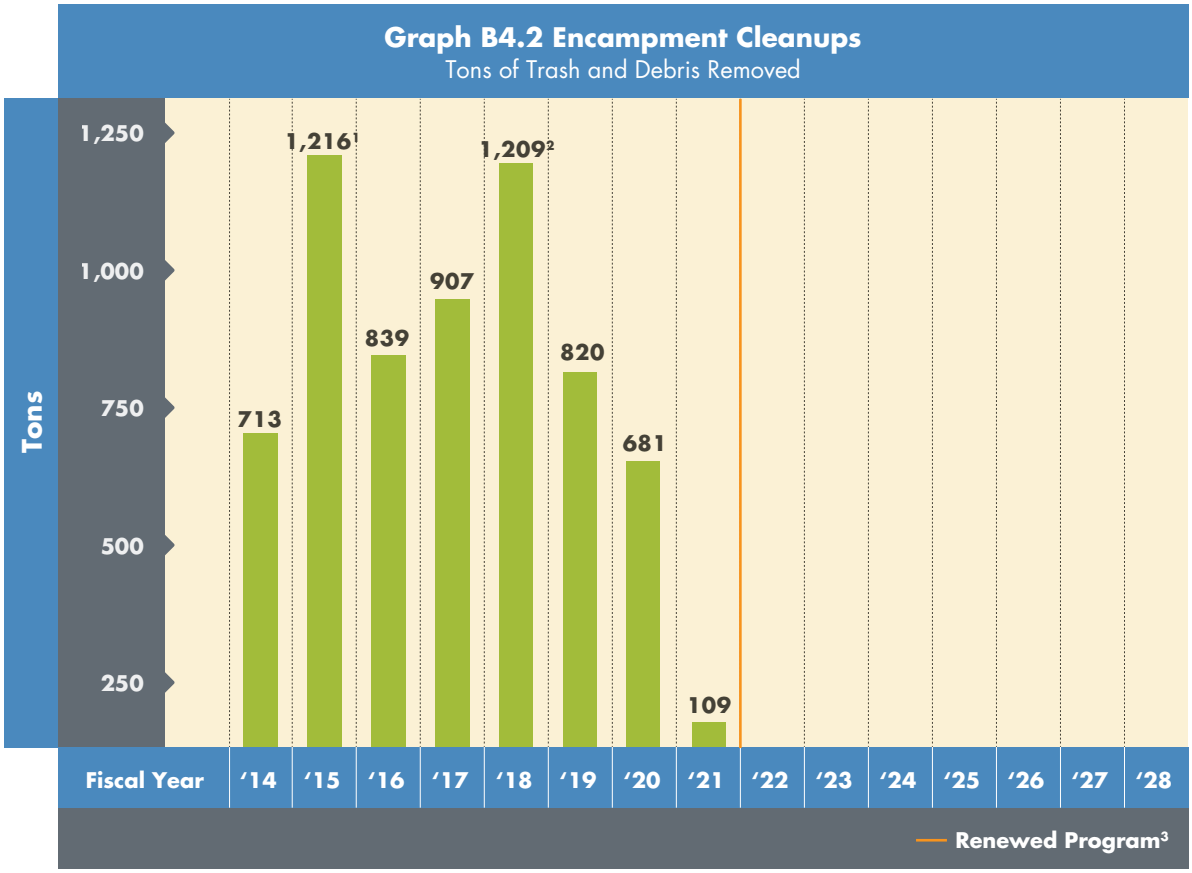
As mentioned earlier, Valley Water continued to perform cleanups adjacent to homeless encampments to reduce the amount of trash and debris in local waterways and these activities were funded through Project B6: Good Neighbor Program: Remove Graffiti and Litter.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.



[1] In FY15, the Encampment Cleanup totals spiked as a result of trash and debris removed from combined cleanups in Coyote Creek in December 2014.

[2] In FY18, the Encampment Cleanup totals spiked due to an increase in community demand.

[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Project B5

Hazardous Materials Management and Response

This project allows Valley Water to continue providing a local, toll free number to report hazardous materials spills 24 hours a day, 7 days a week. Emergency staff responds within 2 hours of the initial report, with spill cleanup in Valley Water rights-of-way performed in a timely manner. Appropriate agencies are alerted when spills are outside Valley Water jurisdiction.

Absorbent pads soak up Matadero Creek diesel spill.

ON TARGET

Project B5 FY21 Highlights

- Met 100% of the required two (2) hour or less response time for urgent calls, with an average response time of 85 minutes countywide.
- Received 110 incident calls countywide, of which 23 received an on-site response; six (6) were classified as urgent.

Benefits

- Prevents and reduces contaminants in surface and groundwater
- Provides a quick, systematic emergency response that reduces negative impacts of hazardous materials spills

Key Performance Indicator (15-year Program)

1. Respond to 100% of hazardous materials reports requiring urgent on-site inspection in 2 hours or less.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

In FY21, Valley Water received 110 incident calls countywide, of which 23 received an on-site response; six (6) were classified as urgent. The remaining 87 calls did not receive on-site responses because they were outside of Valley Water's jurisdiction, were reporting an event that occurred in the past and was already mitigated or were addressed by another Valley Water team. Valley Water met 100% of its required two (2) hour or less response time for urgent calls, with an average response time of 85 minutes countywide.

Progress on KPI #1:

Matadero Creek Diesel Spill

In May 2021, a facility located in Palo Alto experienced mechanical problems with their emergency generator unit. This resulted in approximately 200-gallon of diesel fuel escaping into the environment and a portion of it getting into the nearby Matadero Creek. Valley Water's Pollution Hotline staff, along with representatives for Palo Alto Fire Department, and the California Department of Fish and Wildlife responded to the incident. The spill was confined to a 500-foot section of Matadero Creek. A local hazardous waste firm, Environmental Logistics, was brought to undertake mitigation activities.

Boom deployment at Stevens Creek Reservoir.

Financial Information

In FY21, 77% of the annual project budget was expended.

Expenditures under this project can fluctuate widely based on the following:

1. The number of calls received on the Pollution Prevention hotline;
2. The number of calls requiring a field response;
3. The varying amount of time required to resolve/mitigate once in the field; and
4. The unspecified amount of waste to be disposed under the Emergency Response Program.

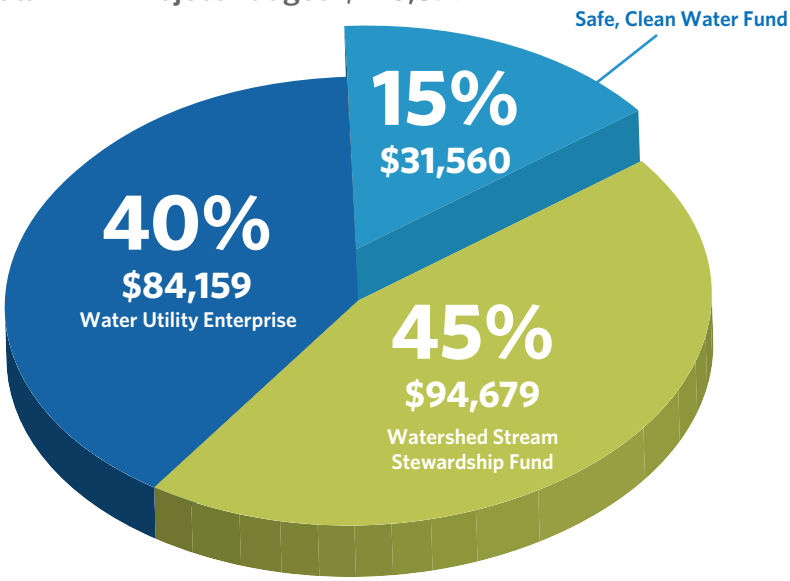
Financial Summary ($ Thousands)
B5. Hazardous Materials Management and Response

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$32	$0	$32	$24	$0	$24	77%	$618	33%

Figure B5.1

B5 Hazardous Materials Management and Response

Total FY21 Project Budget: $210,397



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure B5.1 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

Opportunities and Challenges

Multiple incidences

It is possible, multiple incidents requiring a field response, could occur in a short timeframe for the sole on-call staff to address. Response Program may potentially have trouble meeting the two (2) hour response goal. However, this rarely occurs and when it has the other three on-call responders have been able to assist to ensure Valley Water meets its KPI.

Response times

Other challenges to meeting timeliness performance standards include accessing remote locations or encountering traffic when traveling to various locations in the county. It is also critical that Valley Water's Pollution Hotline Program staff maintains good working relationships with other response agencies.

Table B5

Fiscal Year	Total Reports	Total Responses*	On-site Responses Classified as "Urgent"	Countywide Average Response Time
2020–2021	110	23	6	85 minutes

*The remaining 87 calls did not receive on-site responses because they were outside of Valley Water's jurisdiction, were reporting an event that occurred in the past and already mitigated, or were addressed by another Valley Water team.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Graffiti in Adobe Creek channel.

ON TARGET

Project B6 FY21 Highlights

- Removed 168 tons of debris countywide.
- Removed 101,628 square feet of graffiti at 1,807 sites throughout the county.
- Logged 292 complaints regarding illegal dumping and trash and 54 complaints regarding graffiti.

Project B6

Good Neighbor Program: Remove Graffiti and Litter

This project allows Valley Water to continue responding to complaints about illegal dumping, trash and graffiti on Valley Water property and rights-of-way. Cleanup efforts include graffiti removal from headwalls, concrete embankments, signs, structures and other Valley Water assets, as well as maintaining, repairing and installing fences and gates so that Valley Water structures and facilities remain safe and clean. The project also includes quarterly cleanups of problem sites to help reduce waterway pollution and keep creeks and riparian areas free of debris.

Benefits

- Reduces trash and contaminants in local waterways
- Improves the appearance of waterways in neighborhoods and parks by removing trash, graffiti and litter as well as illegally dumped items such as cars, shopping carts, appliances, etc.
- Reduces illegal dumping into or near waterways by repairing and installing fencing on Valley Water property
- Provides coordinated response to community complaints about trash and graffiti in neighborhoods

Key Performance Indicators (15-year Program)

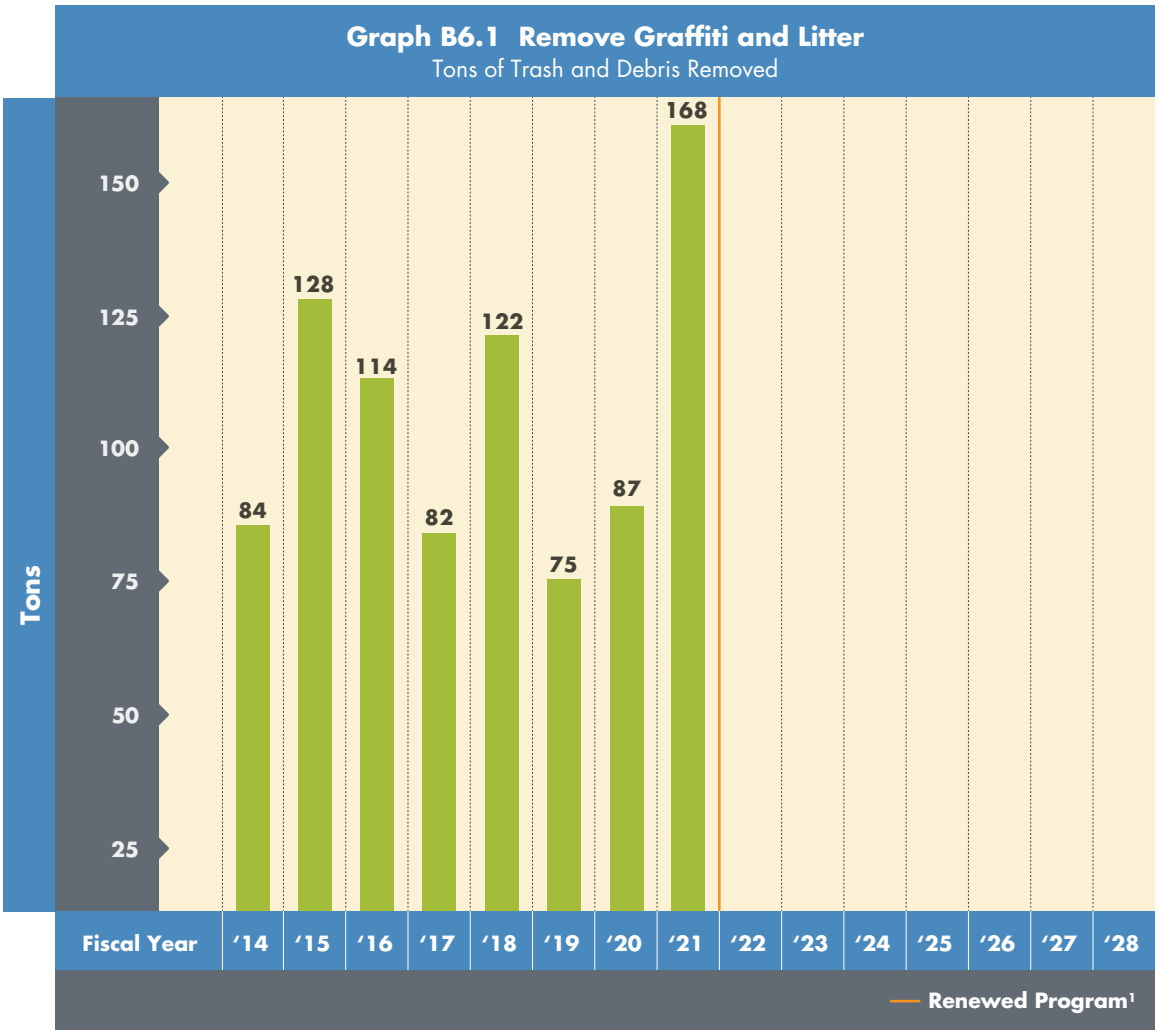
1. Conduct 60 cleanup events (4 per year).
2. Respond to requests on litter or graffiti cleanup within 5 working days.

Geographic Area of Benefit Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Progress on KPI #1:

- Conducted four (4) litter cleanup events (1 per quarter), which consisted of removing trash and debris from a total of 410 sites throughout the county. These sites were identified as trash hot spots where Valley Water had fee title. In total, 168 tons (2,347 cubic yards) of debris was removed countywide (Graph B6.1).
- Conducted four (4) graffiti cleanup events throughout the county removing graffiti from identified locations and from sites based on inspection or citizen complaint within five (5) working days. A total of 101,628 square feet of graffiti was removed at 1,807 sites throughout the county.

Progress on KPI #2:

- Logged 292 complaints regarding illegal dumping and trash and 54 complaints regarding graffiti on the online customer service center--Access Valley Water (AVW). All AVW complaints were responded to within five (5) days or less (1.6 days on average) regarding scheduling the planned activity. Each complaint must be assessed to determine whether the reported location is on Valley Water property. For graffiti complaints on Valley Water property, work was completed on average within 1.1 days of being reported to the outside contractor.

Financial Information

In FY21, 134% of the annual project budget was expended.

The overspending was due to an increase in trash in the creeks and riparian corridors generated from illegal dumping activities and encampments.

Following the evolving CDC guidance regarding homeless encampment abatements during the pandemic, local agencies, including Valley Water, ceased encampment abatements under Project B4 Good Neighbor Program: Encampment Cleanup until mid-March 2021. However, Valley Water continued to perform cleanups adjacent to homeless encampments to reduce the amount of trash and debris in local waterways and these activities were funded through Project B6.

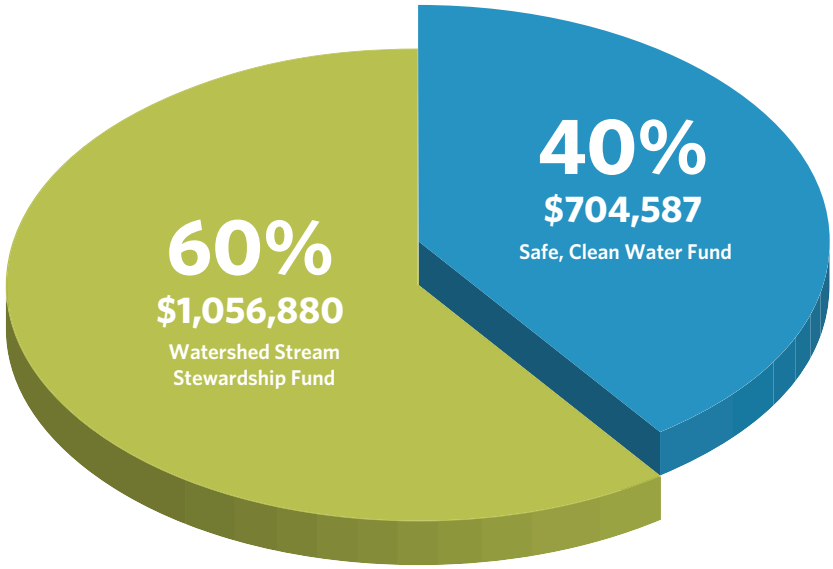
Financial Summary ($ Thousands)
B6. Good Neighbor Program: Remove Graffiti and Litter

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$705	$0	$705	$890	$51	$941	134%	$10,038	47%

Figure B6.1

B6 Good Neighbor Program: Remove Graffiti and Litter

Total FY21 Project Budget: $1,761,467



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure B6.1 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

Opportunities and Challenges

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup was very high, although volunteer activities were impacted by the COVID-19 pandemic. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6, and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects continued to optimize the use of the various funding sources. For additional information on the volunteer program, please see Project B7.

Contractor Services

The approach of utilizing the services of a contractor to remove graffiti has proven to be successful for Valley Water. In FY21, the contractor conducted monthly inspections of five (5) specific geographic locations with subsequent removal of any graffiti found. Utilizing a computer application for smart phones, the contractor also responded to 1,807 sites resulting in removal of 101,628 square feet of graffiti. On average work was completed in less than 1.1 days of being reported. Because of the success of this program, graffiti removal will continue to be addressed by a contractor in FY22.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.

Project B7

Support Volunteer Cleanup Efforts and Education

This project provides grants and partnerships for cleanup, education, outreach and watershed stewardship activities. Funding also allows Valley Water to continue supporting volunteer cleanup activities such as National River Cleanup Day, California Coastal Cleanup Day, the Great American Pick Up, and Adopt-A-Creek, as well as Creek Connections Action Group and creekwise education.

Volunteers collect trash on Coastal Cleanup Day.

ON TARGET

Project B7 FY21 Highlights

- The Board awarded a total of $188,558 for four (4) grant projects.
- Closed three (3) grant projects.
- Continued administering 14 open grants and partnerships.
- Continued to fund three (3) of the four (4) countywide volunteer cleanup activities during the COVID-19 pandemic.

Benefits

- Reduces contaminants entering our waterways and groundwater
- Engages community, and supports watershed stewardship
- Leverages volunteer community resources for efficient use of funds

Key Performance Indicators (15-year Program)

1. Provide 7 grant cycles and 3 partnerships that follow pre-established competitive criteria related to cleanups, education and outreach, and stewardship activities.
2. Fund Valley Water support of annual National River Cleanup Day, California Coastal Cleanup Day, the Great American Pick Up; and fund the Adopt-A-Creek Program.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- On February 23, 2021, the Board awarded a total of $188,558 for four (4) grant projects:
  - Bay Area Older Adults – Watershed Waste Reduction Program ($40,985)

- Grassroots Ecology – Coyote/Stevens Creek Watershed Community Engagement Project ($49,980)
- IISME, dba Ignited – Santa Clara Water Weeks ($47,593)
- Silicon Valley Bicycle Coalition – Wheels and Waterways ($50,000)

- From FY14-20, 19 grant projects and one (1) partnership were awarded for a total of $878,406. Of these, 11 were completed and closed.
- See Appendix C for a cumulative list of grants and partnerships awarded to date.

Valley Water grant-funded Guadalupe River Park Conservancy's mural painting underneath the Coleman Ave. bridge.

Progress on KPI #2:

Continued funding of countywide volunteer cleanup activities (Graph B7.3):

- ***National River Cleanup Days (May 1, 8, 15, 22, 29, 2021):*** In 2021, the event took place every Saturday in May from 9 a.m. to noon. Volunteers were able to register on Eventbrite to receive safety guidelines, recycling and hazardous waste information, and sign up to pick up supplies such as trash bags, litter sticks, and gloves at a variety of locations throughout the County. Volunteers recorded their cleanup efforts on an app called CleanSwell. 774 volunteers removed about 77, 043 pounds of trash including 203.3 pounds of recyclables along 128 miles in Santa Clara County.
- ***Coastal Cleanup Days (September 5, 12, 19, 26, 2020):*** 1,240 volunteers removed about 46,272 pounds of trash including 913 pounds of recyclables along 336 miles in Santa Clara County
- ***Great American Litter Pickup:*** The Great American Litter Pickup 2020 was cancelled due to the countywide shelter-in-place order to slow the spread of COVID-19.
- ***Adopt-A-Creek* (AAC) *(year-round):*** This year, the program saw growth in new partnerships and was more accessible to the public with interactive creeks maps. As of May 2021, Valley Water had 74 active adopted sites with 65 groups committing to host a minimum of two (2) cleanup events per year. Partners continued to utilize the online customer service center, Access Valley Water, to report cleanup numbers and request trash pickups. Valley Water continued to utilize social media to outreach and increase awareness of the program.

Financial Information

In FY21, 36% of the annual project budget was expended.

The COVID-19 countywide guidance included a shelter-in-place order and other restrictions that impacted and delayed many grant projects, especially those interfacing with the public. The under-expenditure was due to delays in executing grant agreements. Due to CEQA compliance requirements and impacts from the COVID-19 public health orders, staff and grantees experienced delays in executing agreements for projects that were awarded funding. The grant funds that were budgeted for FY21 will be adjusted into FY22 to align with the agreements that need to be executed, per Board approval.

During the pandemic, the Adopt-A-Creek program was on pause for six (6) months. National River Cleanup and Coastal Cleanup adapted a virtual format and encouraged participants to use their household supplies for cleanups to prevent travel and exposure. Additionally, the cancellation of National River Cleanup in FY20 resulted in a carryover of supplies for FY21.

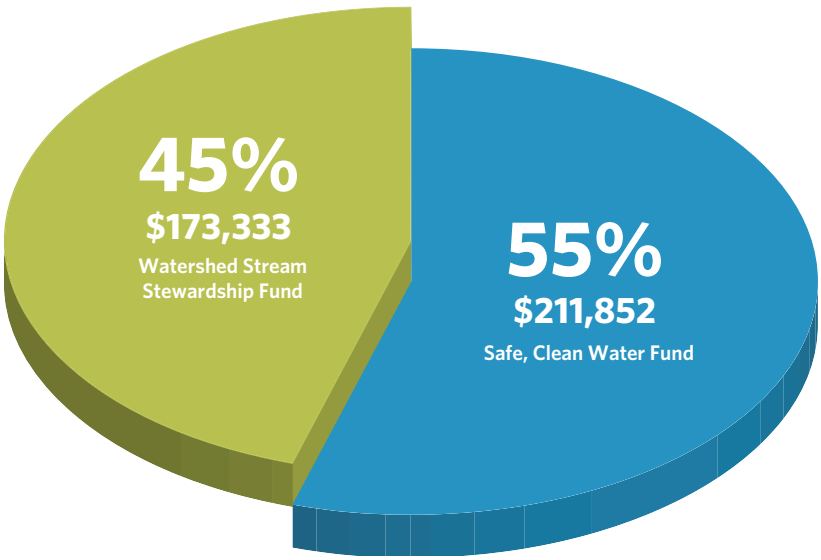
Financial Summary ($ Thousands)
B7. Support Volunteer Cleanup Efforts and Education

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$206	$6	$212	$75	($0)	$75	36%	$2,326	64%

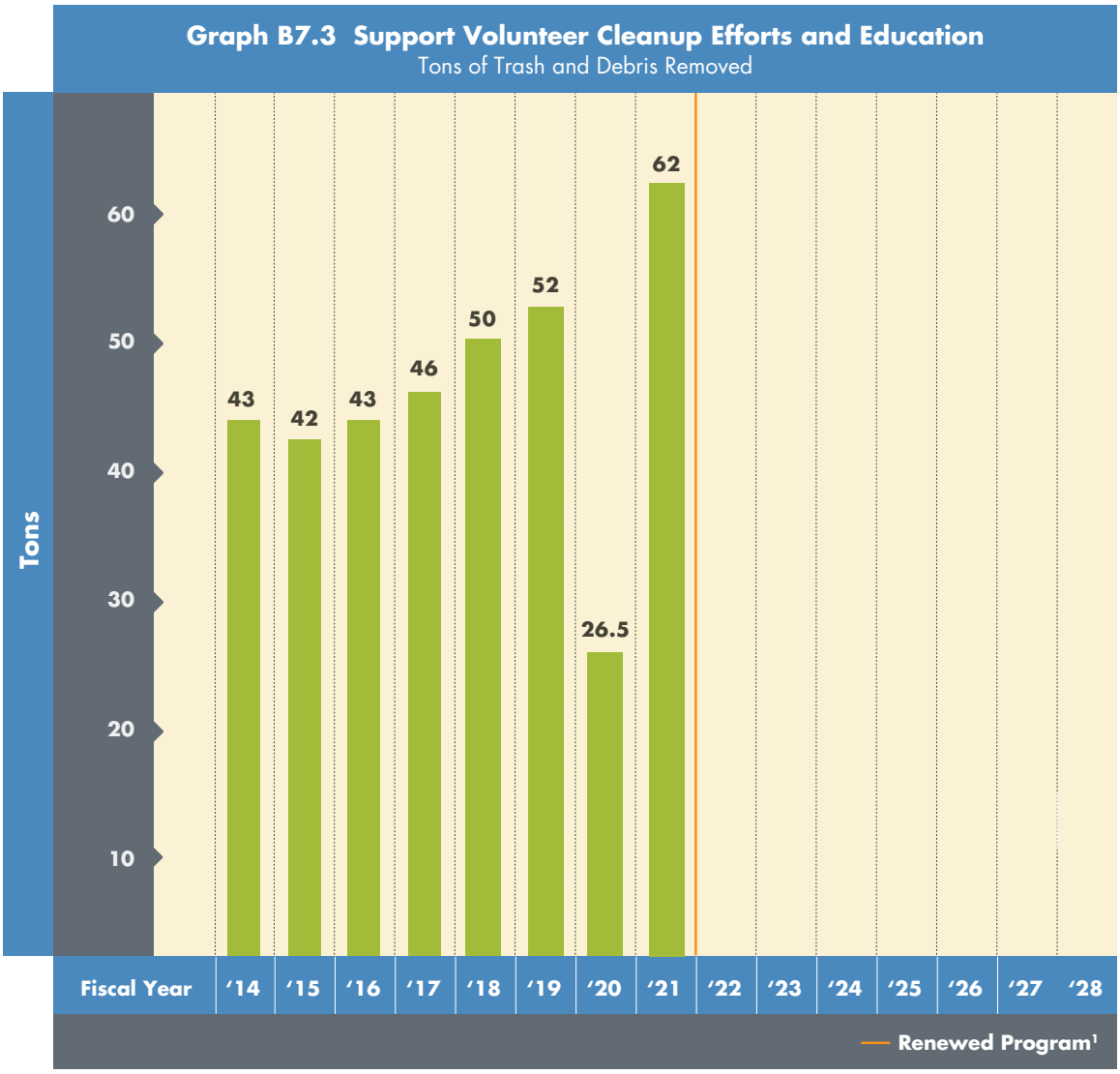
Figure B7.2

B7 Support Volunteer Cleanup Efforts and Education

Total FY21 Project Budget: $385,185



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure B7.2 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Opportunities and Challenges

FY21 Safe, Clean Water Grant Program Audits and Improvements

The Board Audit Committee approved a desk audit of the grants program by an external auditor in FY20. The outcome of the desk audit was the recommendation for a subsequent performance audit for the grants program. In FY21, staff worked with the external auditor, subcontracted under TAP International, to identify streamlining opportunities and collect the IMC and Board's requested metrics. In early 2021, the auditor completed the full program audit and presented findings and recommendations to the Board Audit Committee and the entire Board for acceptance.

As a result of the audit and stakeholder feedback, the following improvements were implemented in FY21:

- Invoices are now reviewed within 10 days of receipt and paid out within 30 days of invoice approval.

- Staff tracks and monitors key administrative milestones, including application review status, agreement drafting and execution, invoicing, closeouts and outreach.
- Staff worked with internal stakeholders to develop standardized agreement templates for all grant types, retroactive start dates for projects, insurance waivers for low-risk mini-grant projects and electronic approval routing for agreement execution.
- Staff provides improved grantee guidance and assistance, including project and grant administration orientations for grantees; convenient meetings and coaching through online platforms like Zoom; 48-hour response time for email and telephone inquiries; and the use of DocuSign electronic signatures for agreements and invoices.
- Dashboards were created in the Fluxx Grants Management System (Fluxx) to streamline reviews for grant proposals, mini-grants, CEQA, and Valley Water permits.
- Staff conduct virtual grant workshops that are posted on the website as a resource for potential applicants.
- Staff participated in grant training provided by recognized grant professional organizations, such as the National Grants Management Association (NGMA), PEAK Grantmaking and FluxxCon training through Fluxx.

As a result of the audit and stakeholder feedback, the following improvements are currently under development:

- Staff began developing a program policy and procedures manual, using Valley Water's QEMS guidelines and NGMA best practices to ensure program consistency, efficiency and compliance. In addition, manuals and online resources are being developed for grantees.
- In June 2021, a consultant launched a robust survey of current and past grantees. Results will help develop program procedures, improve grantee experience and redesign the grants and partnerships program under the renewed Safe, Clean Water Program to incorporate best practices and any other improvements.
- In November 2020, staff began planning and developing a redesigned Safe, Clean Water grants and partnerships program under the renewed program. This plan includes a transition program for FY22. Staff was interviewing stakeholders, collecting lessons learned, and procuring a consultant to create the redesigned program. This program will incorporate audit recommendations such as grant criteria, right-sizing grant policies and procedures, risk analysis, best practices, new grant opportunities and process improvements.

Staffing

Past staffing issues resulted in a backlog of invoices, agreements, mini-grant applications and project closeouts. However, a permanent Senior Management Analyst position was filled in June 2020 and temporary staffing resources were dedicated to supporting the program, addressing the backlog and updating Fluxx records.

The audit and IMC recommended increased staffing levels to address the growing need for program-dedicated staffing to manage the increasing number of grant projects. On May 11, 2021, the Board approved two additional staff positions for the program. Recruitment began in June 2021.

COVID-19 Impacts to Safe, Clean Water Grants Program

In March 2020, the Santa Clara County Public Health Officer issued countywide guidance to slow the spread of COVID-19 in our community. The countywide guidance included a shelter-in-place order and other restrictions,

which impacted many grant projects, especially those interfacing with the public and involving work outdoors. Staff continued to support grantees in navigating project implementation during the pandemic in FY21. Grantees found creative ways to continue their project activities; however, many of the grantees could not perform many project tasks due to social distancing mandates in FY21.

Staff continues to receive and process several time-extension requests, schedule adjustment inquiries and delays to agreement executions due to the impacts of COVID-19. The Board approved longer agreement terms for FY21 grants to account for COVID-related delays. Staff will continue to monitor these projects and work with grantees to address these unforeseen changes.

Volunteer Creek Cleanup Partnership Program

Valley Water attends monthly Creek Partners meetings with the City of San José for better coordination on cleanup efforts and for ongoing communication with various community organizations. Internally, Valley Water holds quarterly meetings to improve coordination among staff working on various pollution prevention priority projects to achieve cost-effectiveness and avoid duplication. Furthermore, Project B1 Impaired Water Bodies Improvement, continues to fund part-time assistance in support of Project B7, the Adopt-A-Creek program, which greatly benefits the interagency urban runoff program.

Annual Volunteer Recognition Event

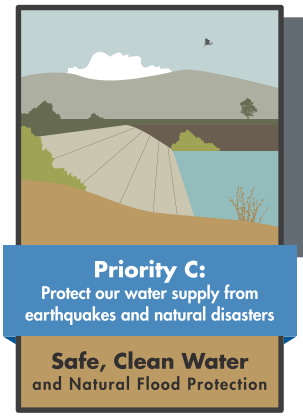
As an opportunity for continued improvement of the Adopt-A-Creek program and to further connect with volunteers, each winter, Valley Water holds a volunteer recognition event for AAC partners and National River Cleanup and Coastal Cleanup volunteers. The event continues to serve as an opportunity to recognize volunteers and their contributions in maintaining clean and healthy creeks and to help recruit new AAC partners. The next volunteer recognition event is planned for winter of 2021.

COVID-19 Impacts to Creek Stewardship Activities

In alignment with the public health order due to the COVID-19 pandemic, large group cleanup events and activities were limited. Valley Water staff encouraged local neighborhood opportunities and alternatives to host smaller scale cleanups to avoid large group gatherings.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/project-updates/safe-clean-water-and-natural-flood-protection-program***.



Priority C

Protect our Water Supply from Earthquakes and Natural Disasters

Projects under Priority C include retrofitting to protect our water supply infrastructure from the impacts of natural disasters, like earthquakes. It also includes emergency flood response enhancements to improve communication between responders and help reduce damages from floods.

Project C1
Anderson Dam Seismic Retrofit

Project C2
Emergency Response Upgrades

Anderson Dam

ON TARGET

Project C1 FY21 Highlights

- Commenced construction of Anderson Dam Tunnel Project.
- Completed the first fund transfer in FY16 and second and final transfer was scheduled for FY28.

Project C1

Anderson Dam Seismic Retrofit

Anderson Reservoir is currently limited in its capacity due to seismic concerns, costing Santa Clara County valuable drinking water resources. This project covers earthquake retrofitting of Anderson Dam to improve reliability and safety, and returns the reservoir to its original storage capacity.

Anderson Dam creates the county's largest surface water reservoir—Anderson Reservoir— which stores local rainfall runoff and imported water from the Central Valley Project. The reservoir is an important water source for treatment plants and the recharge of the groundwater basin. Besides restoring drinking water supplies, the upgrade also supports compliance with environmental regulations. Valley Water's regular reservoir releases ensure that downstream habitat has healthy flows and temperatures to sustain wildlife.

A breach of Anderson Dam at full capacity could have catastrophic consequences, including inundation of surrounding land more than 30 miles northwest to San Francisco Bay, and more than 40 miles southeast to Monterey Bay.

In December 2016, the Board was informed by Valley Water that findings from the geotechnical and geologic investigations performed during the project's design phase led to the conclusion that a more extensive dam retrofit than had originally been envisioned would have to be performed. Further, the Board was informed that the more extensive retrofit work would double the previous project's estimated cost. Valley Water presented the Board with a water supply cost-benefit analysis that showed the benefits of the more extensive retrofit project significantly outweighed the cost of not proceeding with the retrofit, which would require Valley Water to purchase additional imported water every year to make up for the loss of long-term storage at Anderson Reservoir. Based upon this information and analysis, the Board directed Valley Water to continue work on this critical infrastructure project.

Benefits

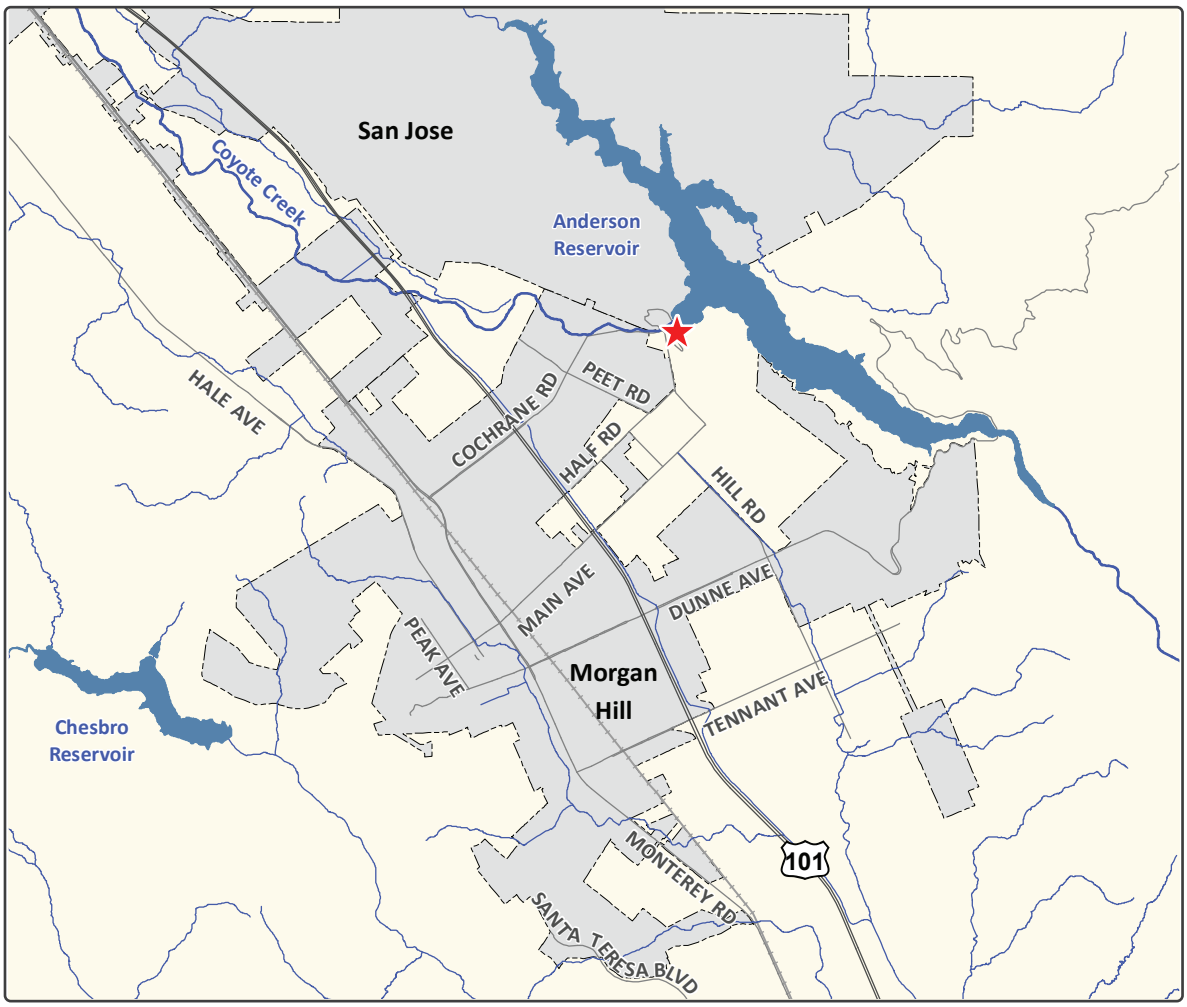
- Brings the dam into compliance with today's seismic standards
- Increases reliability and safety of our area's largest reservoir by protecting it from earthquakes
- Eliminates operational restrictions issued by the state Department of Water Resources Division of Safety of Dams (DSOD) which would restore Anderson Reservoir to its full capacity of approximately 90,373 acre-feet, regaining 48% or about 43,500 acre-feet of water storage for our current and future water supply
- Ensures compliance with environmental laws requiring reservoir releases that maintain appropriate flows and temperatures to support downstream wildlife habitat
- Minimizes the risk of uncontrollable releases from the reservoir which could cause downstream flooding

Key Performance Indicator (15-year Program)

1. Provide portion of funds, up to $45 million, to help restore full operating reservoir capacity of 90,373 acre-feet.

Geographic Area of Benefit: Countywide

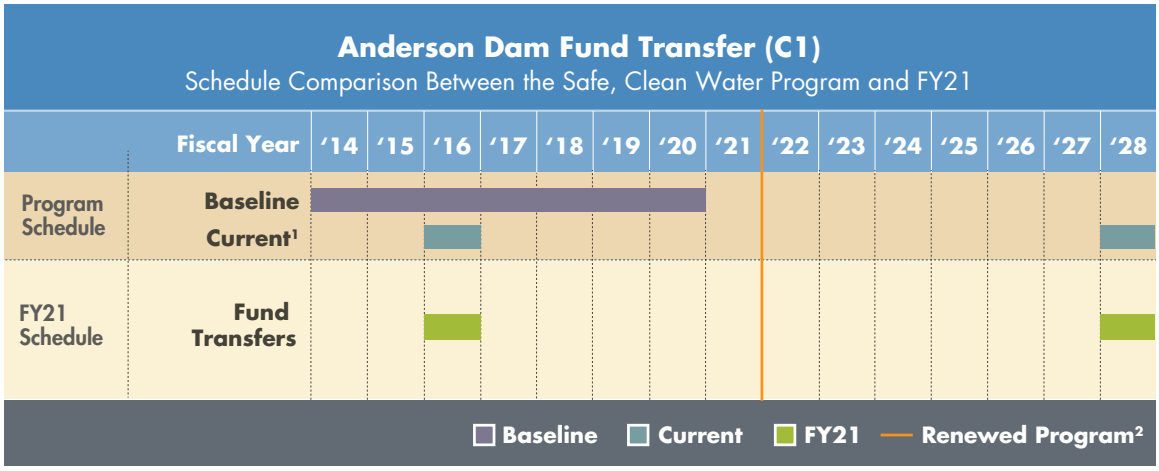
Project Location



Legend

★ Project Location	Santa Clara County Cities
— Coyote Creek	Santa Clara County

Schedule



[1] Board approved a schedule adjustment through the change control process in FY17.
[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- The first fund transfer was completed in FY16. The second and final transfer was scheduled for FY28. However, under the renewed Safe, Clean Water Program that voters approved in November 2020, the project KPI and schedule have been updated. For more information on the Anderson Dam Project, visit ***https://www.valleywater.org/project-updates/c1-anderson-dam-seismic-retrofit***.

Financial Information

In FY21, there was no budget allocation for this project.

Opportunities and Challenges

Progress

On May 28, 2021, Valley Water issued a notice to proceed to Flatiron West Inc. to construct the Anderson Dam Tunnel Project (ADTP), an offshoot of one portion of the Anderson Dam Seismic Retrofit (ADSRP) Project. Earlier, on April 27, 2021, the Valley Water Board had awarded Flatiron West Inc. the ADTP construction contract for $161,140,321.

This followed the February 2020 order by the Federal Energy Regulatory Commission (FERC), the federal dam regulator, directing Valley Water to immediately implement risk reduction measures to protect the public from the risk of Anderson Dam failure due to seismic activity and develop and implement necessary avoidance, minimization and mitigation measures. The FERC order included maintaining Anderson Reservoir at a level no higher than 565 feet elevation immediately and begin lowering the reservoir to an elevation of 488 feet in a safe manner no later than October 1, 2020. FERC issued a second order on October 1, 2020, that approved the measures of the Reservoir Drawdown and Operations Plan necessary for Valley Water to effectuate the reservoir drawdown. The October 2020 order includes drawdown of the reservoir, reservoir bank and rim stability improvements, existing intake structure modifications, imported water releases and Cross Valley Pipeline extension, and steelhead and fish avoidance and minimization measures.

In compliance with the February 2020 FERC order, Valley Water immediately restricted the reservoir to 565 feet elevation; began defining the interim risk reduction measures; and initiated emergency consultation processes regarding adverse environmental impacts of these interim risk reduction measures with the regulatory agencies, as appropriate. Furthermore, Valley Water created a project that is described in the Anderson Dam Federal Energy Regulatory Commission Order Compliance Project (FOCP) Engineer's Report. The project, which includes ADTP, is to achieve the following:

a. allow Valley Water a way to safely, reliably and expeditiously draw down Anderson Reservoir (Reservoir) and maintain the Reservoir at a required lower elevation;

b. minimize risks associated with exceeding the restricted Reservoir level and an undersized outlet structure by constructing a new, low-level outlet;

c. prioritize the interim downstream protection of residents and property; and

d. minimize the public health and safety and environmental impacts of reservoir drawdown.

Per the February 20, 2020, FERC order, Valley Water expedited and completed the design of the tunnel, which would provide greater flexibility in maintaining the reservoir levels.

Valley Water started discussions with DSOD and FERC in November 2020 and was officially authorized on April 9, 2021, to utilize phased approvals to authorize the contractor to build the ADTP. The phased approvals intend to allow the ADTP to move forward in Spring 2021, giving FERC and DSOD additional time to review and authorize the more complex components of the ADTP. The project was divided into four phases (1, 2A, 2B and 3) and Valley Water received approvals for Phases 1, 2A and 2B from DSOD. Valley Water also received construction authorization for Phase 1 and engineering design approval for Phase 2A from FERC.

Meanwhile, Valley Water continues to work with FERC to update the environmental/construction schedule of the ADSRP. Pending completion of environmental obligations for the FOCP, Valley Water plans to release the

ADSRP Draft Environmental Impact Report (EIR) for public review as early as November 2021. Valley Water also continued work on the ADSRP 90% design, which is scheduled to be completed at the end of 2021 or early 2022. Construction of the remaining ADSRP elements, including the high-level outlet works and removing and reconstructing the spillway and the dam embankment, will commence subsequently and will take seven (7) years and is dependent on the permit requirements and the field conditions.

Valley Water has been working closely with the regulatory agencies since early 2018. Valley Water is holding monthly technical working group and bi-monthly interagency consultation meetings with key regulatory agencies and the County of Santa Clara. In addition, Valley Water continued to engage key agencies through FY21 for negotiating and securing the necessary permits for project construction.

Valley Water also continued to work with other stakeholders, including the Santa Clara County Department of Parks and Recreation (SCCParks) and the community at large. Staff also provided the Valley Water Board regular updates on the project progress. Regular monthly meetings were held with SCCParks. In FY21, during the COVID-19 pandemic, Valley Water held several virtual community meetings to provide a status update on the project.

Meanwhile, on January 26, 2021, the Board directed staff to pursue the surrender and decommissioning of the Anderson Hydroelectric Facility. The facility, which has been operating at the Anderson Dam for over 30 years, has generated renewable energy as part of the overall Valley Water energy portfolio. Over the last several years, Valley Water has made significant strides in diversifying our energy portfolio towards much more economically favorable and greener solutions to the point that almost 100% of Valley Water's energy use is from carbon-free sources at a very competitive cost. Meanwhile, as with any aging infrastructure, the cost of operating and maintaining the facility has been increasing and exceeds the revenues from power generation at the facility.

As a result, the Board directed staff to take the necessary steps to seek FERC's approval to surrender and decommission the facility, including but not limited to:

- Evaluate the surrender of the license exemption and decommissioning the facility in the ADSRP EIR; and
- Coordinate with FERC and other regulatory agencies to submit all applications and obtain any necessary approval to implement decommissioning of the facility as part of the ADSRP.

Permits

While the FOCP and the ADSRP are two separate independent projects, Valley Water's goal is to incorporate most ADTP infrastructure into the future ADSRP infrastructure and facilities. CEQA and National Environmental Policy Act (NEPA) compliance and regulatory approval processes for the ADSRP continue in parallel to the approval, construction and operation of the FOCP.

FERC is the federal lead agency under NEPA and issued an Environmental Assessment (EA) in support of its ordered dam safety directive on October 1, 2020. FERC issued a supplemental EA for the remaining components of the FOCP on February 2, 2021.

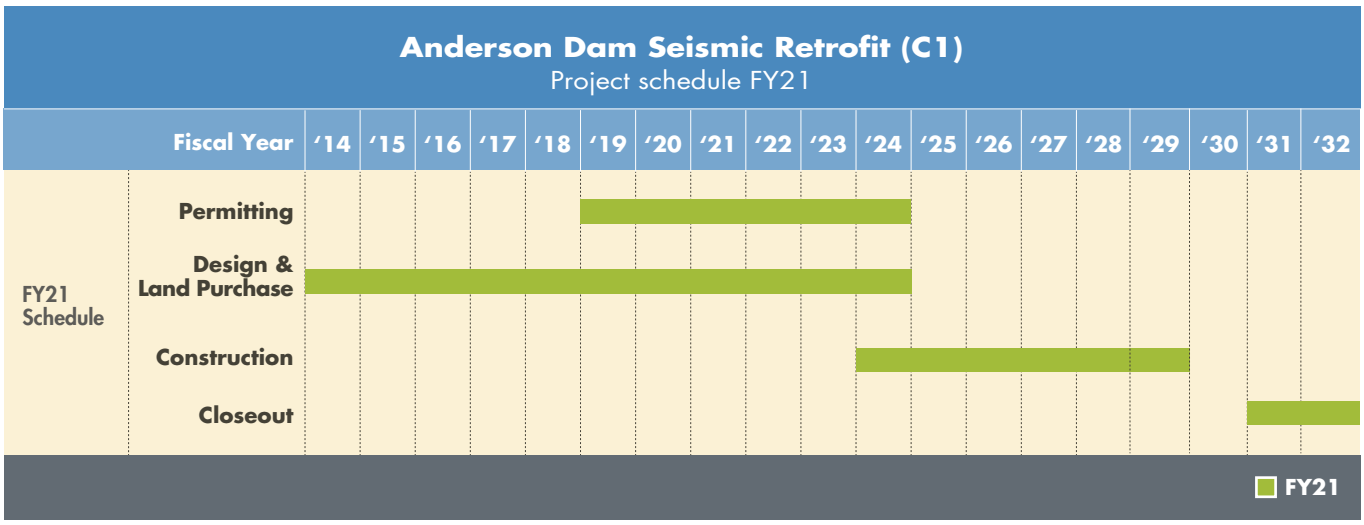
The proposed projects are covered activities under the Santa Clara Valley Habitat Plan (VHP), and the VHP will provide the federal Endangered Species Act and state Natural Community Conservation Planning Act compliance for several special-status species the project may affect, including California tiger salamander, California red-legged frog and coyote ceanothus. Consistent with Habitat Plan requirements, Valley Water has

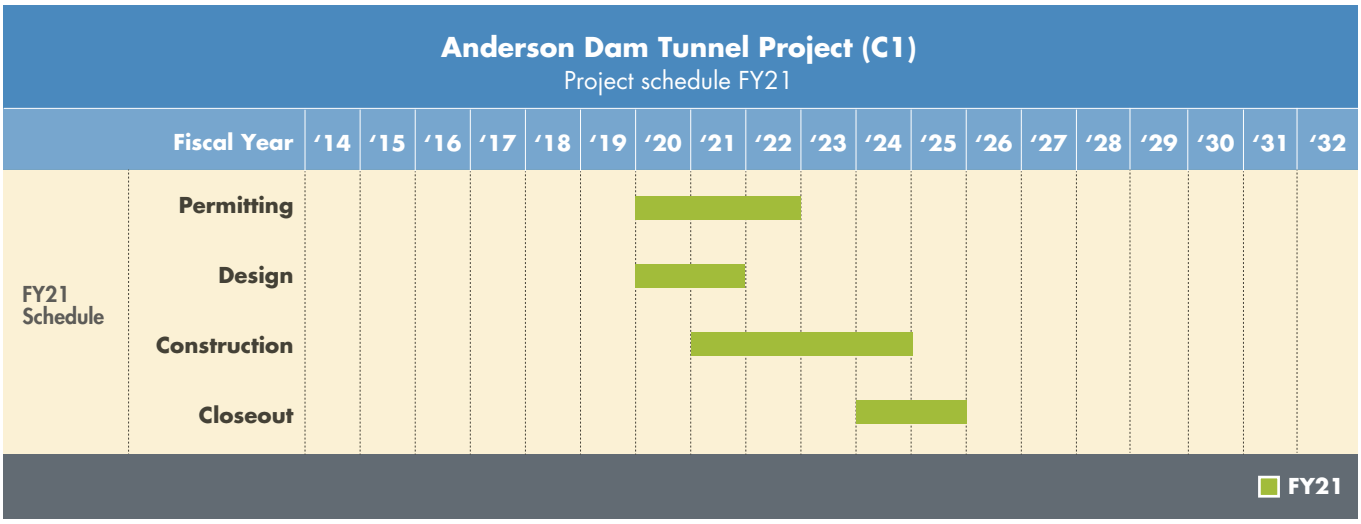
consulted with wildlife agencies with project-specific design and construction details. Several additional informal consultation efforts have also occurred with individual regulatory agencies, including site visits with the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWCB) and National Marine Fisheries Service (NMFS).

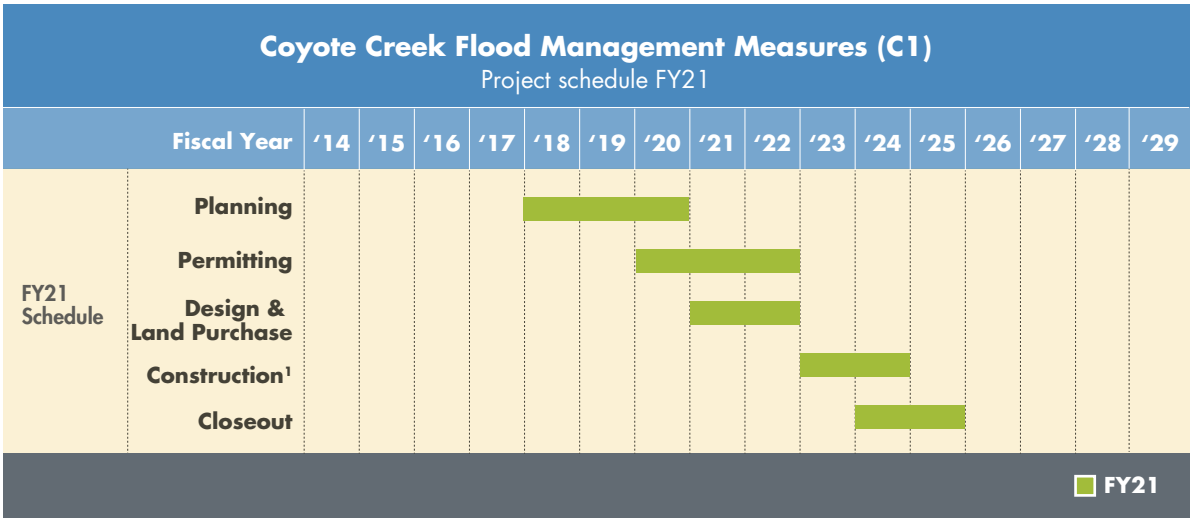
Additionally, Coyote Creek downstream of Anderson Dam is a designated critical habitat for Central California Coast steelhead and essential fish habitat for Chinook salmon. Early coordination with resource agencies indicates potential construction-related water quality concerns, fish passage considerations and operational effects will require appropriate evaluation. Extensive consultation has continued with NMFS, CDFW, State Water Resources Control Board (SWRCB), RWQCB and Valley Habitat Agency on these issues throughout the year.

The Draft EIR to be released for public review will further evaluate the magnitude of impacts of implementing the project. In addition, Valley Water will continue to engage natural resource agencies through development of environmental documentation to support natural resource permitting efforts.

Valley Water's inundation map can be viewed on the C1 website, under Reports and Documents: ***https://www.valleywater.org/project-updates/c1-anderson-dam-seismic-retrofit***







[1] Construction also includes a 3-year revegetation establishment period, not shown.

Confidence levels

Schedule: Moderate confidence

As a result of the FERC order, Valley Water expedited completing the plans and specifications for the FOCP first. The estimated start of construction for FOCP is the summer of 2021 and for ADSRP is 2024.

Funding: High confidence

The total project cost is estimated at $617 million (uninflated) and is in Valley Water's Fiscal Years 2022-26 Capital Improvement Program.

Permits: Moderate confidence

Anderson Dam is operated under licenses from DSOD and FERC. The project design will require their approval before construction. The permits from these agencies will depend mostly on the technical complexity of the project. DSOD and FERC will review the project at various design stages to facilitate the issuance of the permits from the different agencies that will be required for this project, including USACE, NMFS, CDFW, California Department of Industrial Relations/California Occupational Safety and Health, State Water Resources Control Board, and the Santa Clara Valley Habitat Plan. The SWRCB issued a final water quality certification for the FOCP on November 9, 2020. USACE and CDFW are expected to issue final FOCP permits under their jurisdiction in June 2021. The schedule for ADSRP permits cannot be easily predicted; the current permitting path assumes natural resource agency permits will be obtained for the ADSRP by spring 2023.

Jurisdictional Complexity: Moderate confidence

Valley Water owns and operates Anderson Dam and Reservoir, which are located within the City of Morgan Hill. Santa Clara County Parks manages the recreational activities at Anderson Reservoir through a lease agreement with Valley Water. Valley Water is working with these various agencies throughout the project.

See Appendix D: Capital Projects Jurisdictional Complexities for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project C2

Emergency Response Upgrades

This project covers the development of an automated flood warning system that uses real-time rainfall data to predict stream flows and potential flood risk. The system efficiently disseminates information to emergency responders and the public using the web, text, automated calls and other technologies, allowing more time to activate flood-fighting measures and reduce flood damage.

X-Band radar atop Penitencia Water Treatment Plant.

ON TARGET

Project C2 FY21 Highlights

- Maintained seven (7) gauging stations and computer software on seven (7) flood-prone reaches.
- Actively engaged with the National Oceanographic and Atmospheric Administration (NOAA) team to implement the Advanced Quantitative Precipitation Information (AQPI) System to feed forecast data into our system.
- Beta testing the new website that integrates the stream gauge network, historical data and forecast data.

Benefits

- Enhances interagency response to storm-related emergencies
- Improves the accuracy of flood forecasting services
- Helps municipalities and neighborhoods lessen flood impacts
- Maintains access to technical resources that assist municipalities with floodplain management
- Promotes community awareness of flood risks
- Implements risk reduction strategies consistent with the Federal Emergency Management Agency's (FEMA) Community Rating System as appropriate

Key Performance Indicator (15-year Program)

1. Map, install, and maintain gauging stations and computer software on 7 flood-prone reaches to generate and disseminate flood warnings.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- In FY19, Valley Water installed its seventh gauging station and in FY21, it maintained these flood forecast points and the computer software to generate and disseminate flood warnings. Listed below are the seven flood-prone reaches that generate flood forecasts:
  - San Francisquito Creek
  - Ross Creek
  - Upper Guadalupe River
  - West Little Llagas Creek
  - Uvas Creek
  - Upper Penitencia Creek
  - Canoas Creek
- Valley Water continued to be actively engaged with the National Oceanographic and Atmospheric Administration (NOAA) team at the Earth System's Research Laboratory in Boulder, Colorado, to implement the Advanced Quantitative Precipitation Information (AQPI) System. The direct benefit to this project will be a customized rainfall forecast for Valley Water by NOAA that leverages new radar technologies. In FY21, Valley Water has been working with NOAA to complete a "blend forecast," which will combine the best short, medium, and long-range forecast models and products into a single dataset to use in our flood forecasting software. This is still under development and is expected to run into FY22.
- In FY21, the main focus was to develop a new website integrating the stream and rain gauge network, historical data and forecast data. This new website will consolidate many use cases and also disseminate warnings. At the end of FY21, the website is operational and live, with the warning dissemination as the last feature to be implemented. It is expected that the site will remain in beta testing through FY22.

Financial Information

In FY21, approximately 106% of the annual project budget was expended.

Financial Summary ($ Thousands) C2. Emergency Response Upgrades								
Fiscal Year 2020–2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$354	$0	$354	$371	$3	$374	106%	$3,357	76%

Opportunities and Challenges

Reservoir Operations

As additional reservoir inflow forecasts get implemented and accuracy improves, there is opportunity to assist in optimizing the operations of Valley Water's reservoirs. Since these decisions are often complicated and regulated by existing, conflicting needs (for example, balancing water supply, environmental flows, and flood protection), additional work would be needed to study the effects of using forecasts to inform operations. However, tools would need to be in place to help inform the operational decisions, which is an area for development.

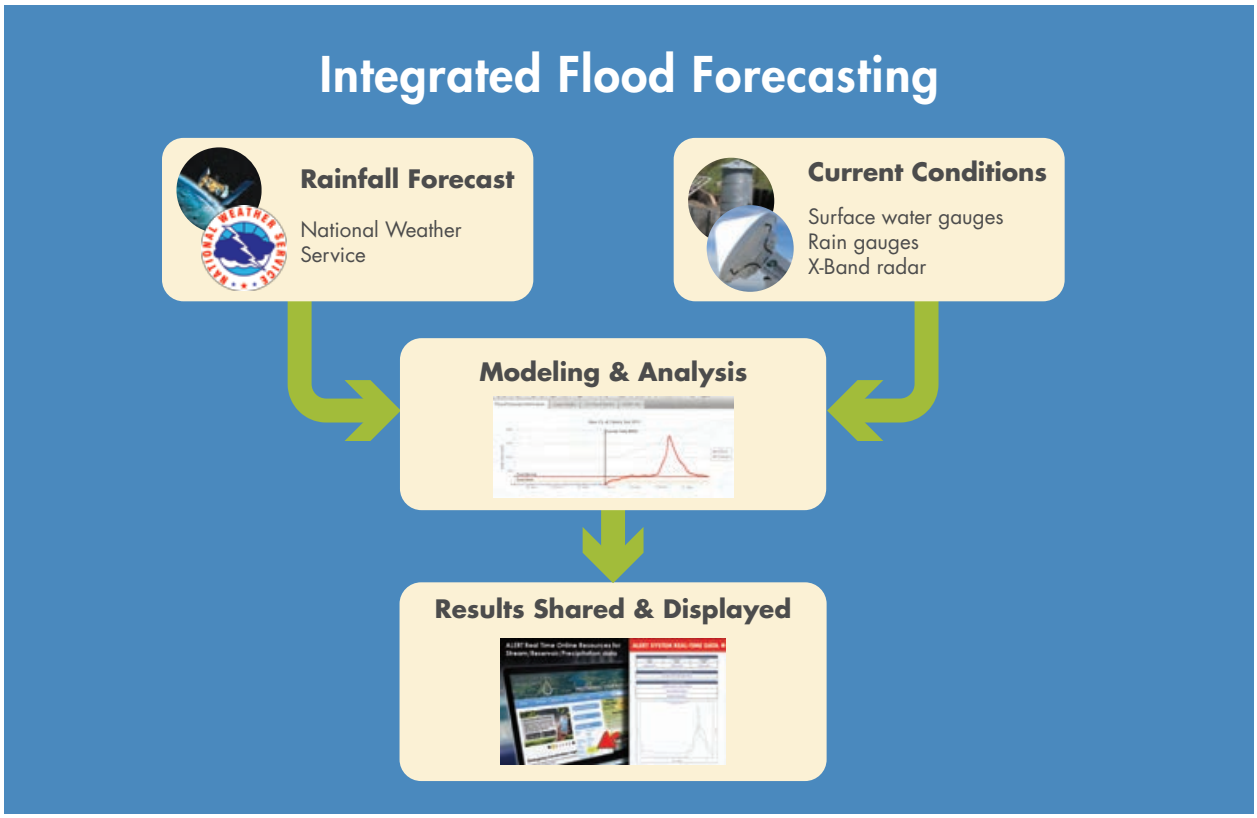
Research & Development

Currently, a proprietary software is being used, but research and investigation is being performed to see if a better system can be built to better suit our needs. This is an area of continuous improvement.

Weather forecasts were and remain the biggest source of error in the forecasts. In addition to the traditional meteorological forecasts from NOAA and our weather consultants, we are exploring the use of ensemble and artificial intelligence driven forecasts.

New Web Portal

As the new website is rolled out, some users might need to get used to the new format and layout. Deciding how to balance different user needs against keeping the overall website simple to use may be challenging.



2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

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Priority D

Restore Wildlife Habitat and Provide Open Space

The eight (8) projects under Priority D restore and protect wildlife habitat and provide opportunities for increased access to trails and open space. Funding for this priority pays for control of non-native, invasive plants, revegetation of native species, and maintenance of previously revegetated areas. Other projects include removal of fish barriers, improvement of steelhead habitat and stabilization of eroded creek banks.

To support these and future restoration projects Valley Water will create a comprehensive, updated database on stream conditions countywide. Valley Water and other agencies can then use the new information to make informed decisions on where and how to use restoration dollars so they have the greatest value for wildlife.

Project D1
Management of Revegetation Projects

Project D2 **Completed (See Completed Projects, page 185)**
Revitalize Stream, Upland and Wetland Habitat

Project D3
Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

Project D4
Fish Habitat and Passage Improvement

Project D5
Ecological Data Collection and Analysis

Project D6
Creek Restoration and Stabilization

Project D7 **Completed (See Completed Projects, page 193)**
Partnerships for the Conservation of Habitat Lands

Project D8
South Bay Salt Ponds Restoration Partnership

Revegetation at Permanente Creek.

ON TARGET

Project D1 FY21 Highlights

- Maintained 315.8 acres of revegetation projects at 95 sites countywide.

Project D1

Management of Revegetation Projects

This project supports Valley Water maintenance of at least 300 acres of existing revegetation projects throughout the 5 watersheds, and provides for maintenance of future revegetation sites. Funding for this project ensures that design objectives of all revegetation projects are maintained during the establishment period so that mitigation results in functional habitat that can support wildlife.

Benefits

- Maintains 300 acres of existing revegetation
- Allows Valley Water to monitor plant survival and habitat functions
- Complies with environmental laws requiring habitat mitigation for flood protection and water supply projects
- Provides for maintenance of future revegetation sites

Key Performance Indicator (15-year Program)

1. Maintain a minimum of 300 acres of revegetation projects annually to meet regulatory requirements and conditions.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	NOT ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

In FY21, Valley Water maintained 315.8 acres of revegetation projects at 95 sites throughout all five (5) watersheds in Santa Clara County. This included invasive plant control, pruning, mowing and irrigation of 22 recently planted sites that require more maintenance. Valley Water monitors the mitigation sites as per the success criteria established by various regulatory agencies. Valley Water provides

the monitoring reports to the regulatory agencies on an annual basis. The monitoring reports can be found at ***tinyurl.com/D1AgencyReports.***

Financial Information

In FY21, 138% of the annual project budget was expended.

The over-expenditure was due to a significant increase in riparian planting acreage to mitigate for the previous year's unplanned intensive vegetation removal effort on Guadalupe River from Tasman Drive to Highway 880.

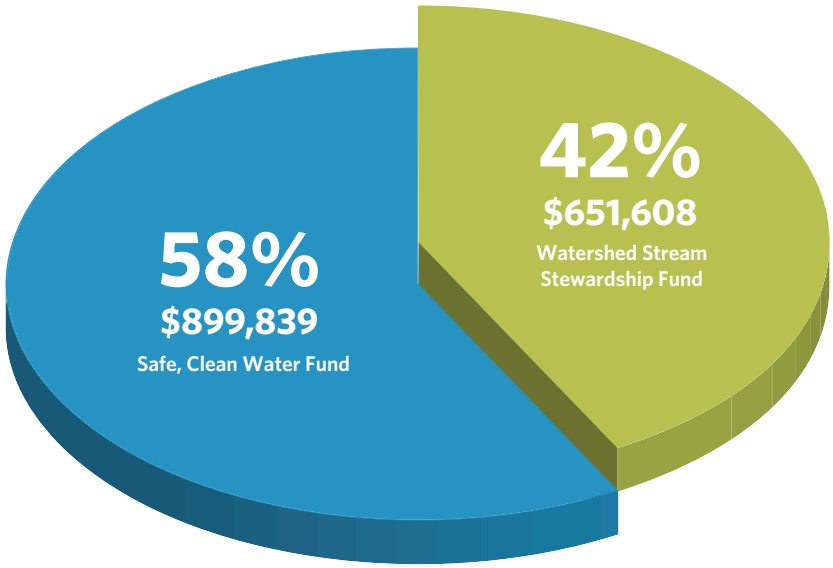
Financial Summary ($ Thousands)
D1. Management of Revegetation Projects

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$900	$0	$900	$1,244	$0	$1,244	138%	$22,259	30%

Figure D1.2

D1 Management of Revegetation Projects

Total FY21 Project Budget: $1,551,447



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure D1.2 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

Opportunities and Challenges

Resources

In FY21, the KPI was met by supplementing available staff resources with a significant amount of outsourced labor. While this allowed Valley Water to meet its KPI, the use of outsourced labor is not sustainable. Five (5) positions were requested for FY21. These position requests were approved and will be filled early in FY22.

Phytophthora

In FY16, Valley Water informed the regulatory agencies that due to the drought and Phytophthora (plant pathogen) issues, Valley Water would not be installing new riparian planting sites. Despite this, increased maintenance is required at the existing sites to ensure survival of vegetation. In FY17, Valley Water began installing new riparian planting sites utilizing seeds, cuttings and container plants grown from nurseries that are following the Phytophthora working group's regional guidelines. Installation of pathogen free nursery plants and locally sources seeds and cuttings continued through FY21.

New Capital Project Mitigation

As the Safe, Clean Water capital projects are constructed, and after the initial 3-year plant establishment period, additional acreages of mitigation will become part of Project D1 and will require increased maintenance to meet their 10-year success criteria. This may require funding additional staff resources in the future.

Projections show that the following acres of mitigation will be transitioned into Project D1 resulting from the completion of specific capital project

- FY23 – An estimated 33 acres of mitigation from the Upper Guadalupe River, Upper Berryessa Creek, Lower Berryessa Creek, Permanente Creek and Cunningham Detention Basin Flood Protection projects.
- FY24 – An estimated 66.5 acres of mitigation from the Sunnyvale Channel, San Francisquito Creek, Upper Llagas Creek Phase 1, Lower Silver Creek Flood Protection projects and Hale Creek Enhancement Project.
- FY25 – An estimated 60 acres of mitigation from the Upper Llagas Creek Phase II Flood Protection Project.
- FY26 – An estimated 1.8 acres of mitigation from the Palo Alto Flood Basin Tidal Gate Project.
- FY27 – An estimated 3 acres of mitigation from the Almaden Lake Project.

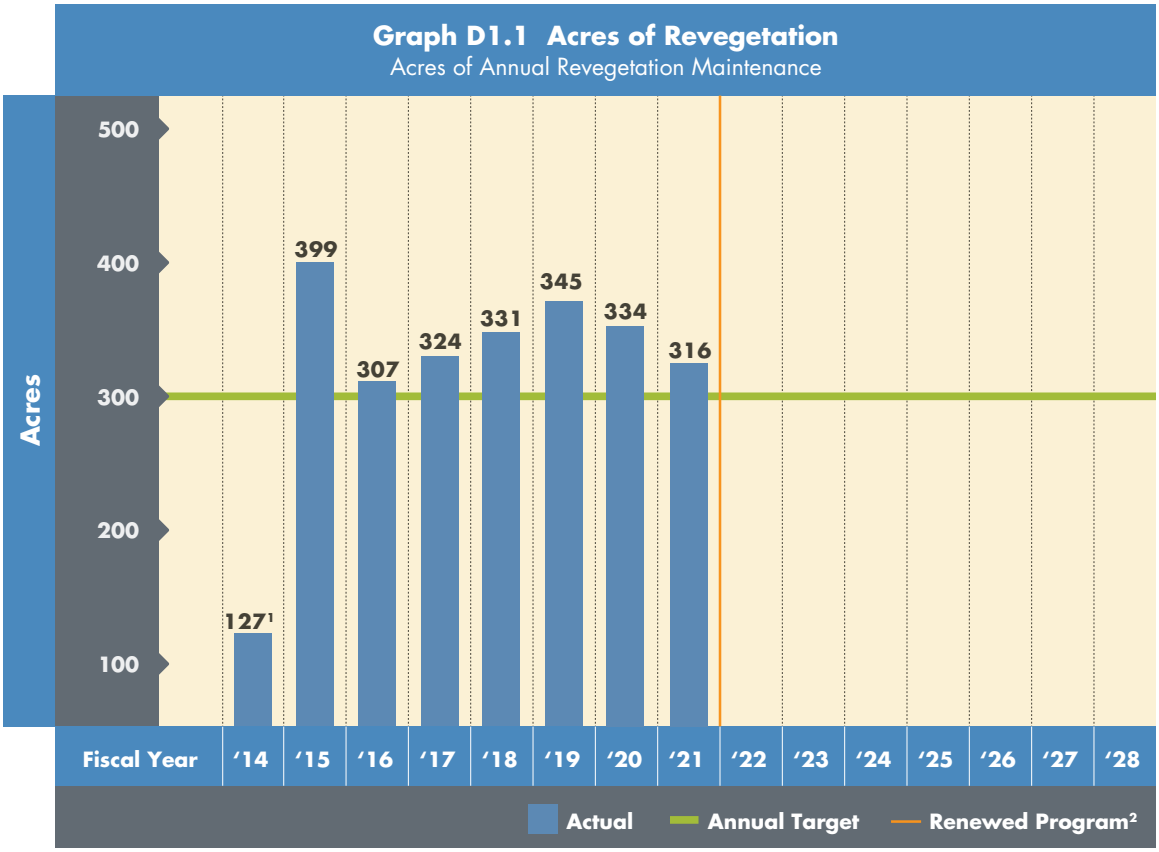
This is an increase of 164 acres of mitigation that will require significant maintenance for these projects to successfully meet their success criteria. Valley Water plans to use a combination of new staff positions that were approved in FY22 and contract labor to supplement existing Valley Water labor resources to comply with the increased mitigation requirements.

Stream Maintenance Program (SMP2) Permits

The SMP2 permits require a significant level of mitigation. Valley Water plans to use newly approved positions and additional contract labor to supplement existing Valley Water labor resources to comply with the increased mitigation requirements.

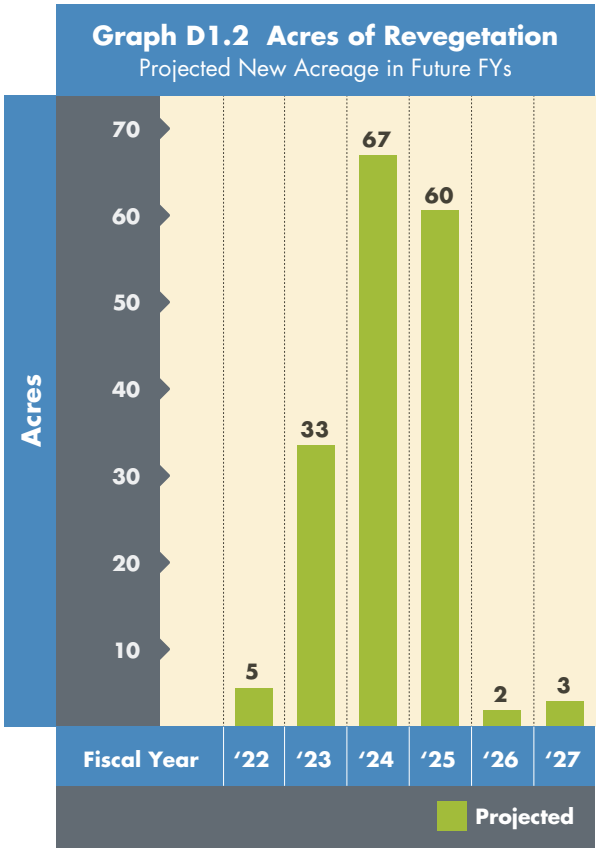
BEFORE: Guadalupe River upstream Blossom Hill, riparian planting.

AFTER: Guadalupe River upstream Blossom Hill, riparian planting.



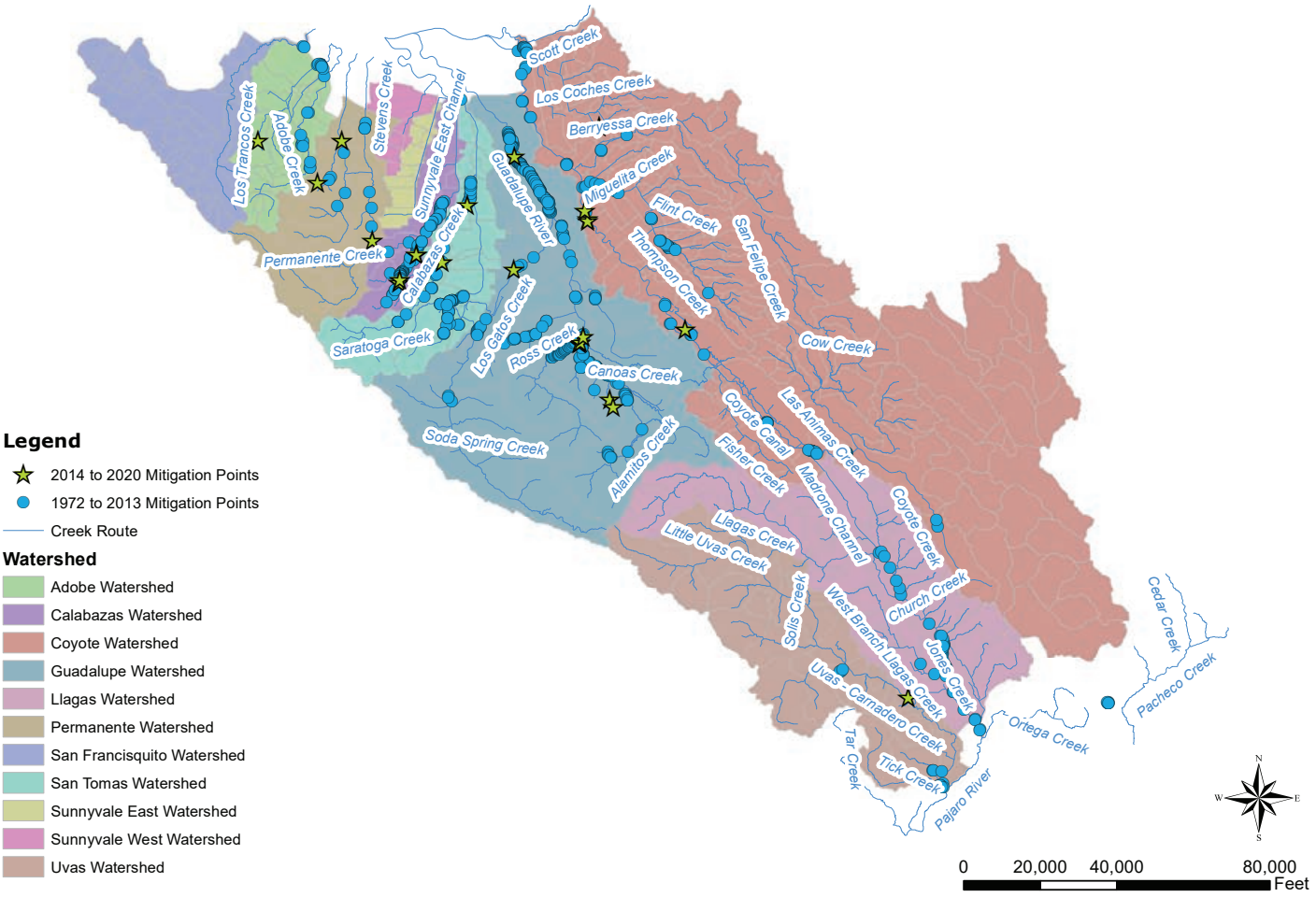
[1] In FY14, the drought required much more maintenance than planned on new or revegetated plantings and thus impacted Valley Water's ability to meet the annual maintenance target.

[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.



The graph above shows the projected new acreage to be maintained as a result of completion of new capital projects.

FY21 Revegetation Maintenance: 316 Acres



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Project D3

Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

This project provides grants and partnerships for activities such as developing Stream Corridor Priority Plans; creating or enhancing wetland, riparian and tidal marsh habitat; protecting special status species; removing fish migration barriers; installing fish ladders; removing non-native, invasive plant species; and planting native species. The project includes 7 grant cycles, 1 held approximately every other year during the 15-year duration of the Safe, Clean Water Program, as well as funding for partnerships that restore stream and wetland habitat and provide open space access. This project also funds work that provides access to creekside trails or trails that provide a significant link to the creekside trail network, for example, the possible construction of a bridge over Coyote Creek in the Rock Springs neighborhood.

Benefits

- Enhances creek and bay ecosystems
- Improves fish passage and habitat
- Expands trail and open space access
- Leverages community funding through grants
- Increases collaborations and partnerships for stewardship activities with cities, the County, nonprofit organizations, schools and other stakeholders

Key Performance Indicators (15-year Program)

1. Develop 5 Stream Corridor Priority Plans to prioritize stream restoration activities.
2. Provide 7 grant cycles and additional partnerships for $21 million that follow pre-established criteria related to the creation or restoration of wetlands, riparian habitat and favorable stream conditions for fisheries and wildlife, and providing new public access to trails.

Geographic Area of Benefit: Countywide

New trail around Calero Reservoir .

ON TARGET

Project D3 FY21 Highlights

- Finalized the Coyote Creek Native Ecosystem Enhancement Tool (CCNEET) and made available to the public.
- 12 mini-grants were awarded for a total of $59,959
- Closed nine (9) grant projects and 11 mini-grant projects.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

- Stream Corridor Priority Plans identify habitat and trail enhancement opportunities of importance to Valley Water, to guide the development of D3 grant applications. The first Stream Corridor Priority Plan, for Stevens Creek, was finalized in FY19.
- The second Stream Corridor Priority Plan, the Coyote Creek Native Ecosystem Enhancement Tool (CCNEET), was completed in FY20 and finalized and made available to the public in FY21. The interactive online tool, as well as background information, data sources and instructions for use can be accessed at ***tinyurl.com/CCNEETlogin***.

Progress on KPI #2:

- On February 23, 2021, the Board approved one (1) grant project for D3: Access to Trails and Open Space for a total of $25,530:
  - Community Express – La Sendera Community Art Trail ($25,530)
- FY21 was not a grant cycle year for D3: Restore Wildlife Habitat grants.
- In FY21, 12 mini-grants were awarded for a total of $59,959:
  - Bay Area Older Adults - Watershed Appreciation Program
  - Bay Area Older Adults - Watershed Walk & Talk Program
  - Bay Area Ridge Trail Council - Ridge Trail Berryessa BioBlitz
  - City of Santa Clara Green - Infrastructure and Water, Wise Native Plant Demonstration Garden Design
  - City of Santa Clara - Adopt-a-Spot Tool Lending Program
  - City of Santa Clara - San Tomas Aquino Creek Trail Pet Waste Station and Public Litter Container Expansion Project

- Gilroy After Hours Rotary Club - Gilroy Watershed Clean Up
- Keep Coyote Creek Beautiful - Empire Gardens Elementary School Mural
- Keep Coyote Creek Beautiful - Hellyer County Park Mural
- Latimer Home and School Club - Latimer Garden & Outdoor Classroom
- President and Board of Trustees of Santa Clara College - The Water Project
- Science is Elementary, Inc. - SiE Books Creek Cleanup

- From FY14-20, 10 Access to Trails and Open Space grants were awarded for a total of $1,397,886 and Valley Water continues to administer these projects. Of these, two (2) projects have been completed or closed.
- From FY14-20, 29 Wildlife Restoration grants were awarded for a total of $5,465,802. Of these, 18 projects have been completed or closed. Two (2) were cancelled per grantee request. Valley Water continues to administer the remaining nine (9) projects.
- From FY14-20, three (3) Wildlife Restoration partnerships were awarded for a total of $764,450. One (1) has been completed.
- From FY14-20, 41 mini-grants were awarded for a total of $197,162. Of these, 24 projects have been completed or closed. Three (3) were cancelled per grantee request.

See *Appendix C* for a cumulative list of grants and partnerships awarded to date.

Financial Information

In FY21, 43% of the annual budget was expended.

The COVID-19 countywide guidance included a shelter-in-place order and other restrictions that impacted and delayed many grant projects, especially those interfacing with the public. The under-expenditure was due to delays in executing grant agreements. Due to CEQA compliance requirements and impacts from the COVID-19 public health orders, staff and grantees experienced delays in executing agreements for projects that were awarded funding. The grant funds that were budgeted for FY21 will be adjusted into FY22 to align with the agreements that need to be executed, per Board approval.

In addition, the Board awarded $25,530 of the available $571,000 in the FY21 grant cycle. A low number of grant applications were submitted in the FY21 cycle in part due to the impacts of COVID-19 on grantees' and applicants' financial and staffing resources created uncertainties for long-term project planning and inability to confidently commit to project performance and project schedules.

Financial Summary ($ Thousands)
D3. Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$1,727	$1,681	$3,407	$395	$1,065	$1,460	43%	$23,276	39%

Opportunities and Challenges

Stream Corridor Priority Plans

In FY18, five (5) watershed creek reaches were selected for the development of the plans. The creek reaches selected are as follows:

1. Lower Peninsula Watershed - Stevens Creek;
2. Coyote Watershed - Coyote Creek (candidate reach is approx. Montague to Coyote Narrows);
3. Guadalupe Watershed - Guadalupe River;
4. Pajaro Watershed - Uvas Creek (downstream of Uvas Reservoir); and
5. West Valley Watershed - Saratoga Creek.

These creeks were selected based on various factors including habitat potential and quality and demonstrated public and volunteer interest. The list of selected creek reaches is subject to change as appropriate.

FY21 Safe, Clean Water Grant Program Audits and Improvements

The Board Audit Committee approved a desk audit of the grants program by an external auditor in FY20. The outcome of the desk audit was the recommendation for a subsequent performance audit for the grants program. In FY21, staff worked with the external auditor, subcontracted under TAP International, to identify streamlining opportunities and collect the IMC and Board's requested metrics. In early 2021, the auditor completed the full program audit and presented findings and recommendations to the Board Audit Committee and the entire Board for acceptance.

As a result of the audit and stakeholder feedback, the following improvements were implemented in FY21:

- Invoices are now reviewed within 10 days of receipt and paid out within 30 days of invoice approval.
- Staff tracks and monitors key administrative milestones, including application review status, agreement drafting and execution, invoicing, closeouts and outreach.
- Staff worked with internal stakeholders to develop standardized agreement templates for all grant types, retroactive start dates for projects, insurance waivers for low-risk mini-grant projects and electronic approval routing for agreement execution.
- Staff provides improved grantee guidance and assistance, including project and grant administration orientations for grantees; convenient meetings and coaching through online platforms like Zoom; 48-hour response time for email and telephone inquiries; and the use of DocuSign electronic signatures for agreements and invoices.
- Dashboards were created in the Fluxx Grants Management System (Fluxx) to streamline reviews for grant proposals, mini-grants, CEQA and Valley Water permits.
- Staff conduct virtual grant workshops that are posted on the website as a resource for potential applicants.
- Staff participated in grant training provided by recognized grant professional organizations, such as the National Grants Management Association (NGMA), PEAK Grantmaking and FluxxCon training through Fluxx.

As a result of the audit and stakeholder feedback, the following improvements were under development:

- Staff began developing a program policy and procedures manual, using Valley Water's QEMS guidelines and NGMA best practices to ensure program consistency, efficiency and compliance. In addition, manuals and online resources are being developed for grantees.
- In June 2021, a consultant launched a robust survey of current and past grantees. Results will help develop program procedures, improve grantee experience and redesign the grants and partnerships program under the renewed Safe, Clean Water Program to incorporate best practices and any other improvements.
- In November 2020, staff began planning and developing a redesigned Safe, Clean Water grants and partnerships program under the renewed program. It included a transition program for FY22. Staff was interviewing stakeholders, collecting lessons learned, and procuring a consultant to create the redesigned program. This program will incorporate audit recommendations such as grant criteria, right-sizing grant policies and procedures, risk analysis, best practices, new grant opportunities and process improvements.

Staffing

Past staffing issues resulted in a backlog of invoices, agreements, mini-grant applications and project closeouts. However, a permanent Senior Management Analyst position was filled in June 2020 and temporary staffing resources were dedicated to supporting the program, addressing the backlog and updating Fluxx records.

The audit and IMC recommended increased staffing levels to address the growing need for program-dedicated staffing to manage the increasing number of grant projects. On May 11, 2021, the Board approved two additional staff positions for the program. Recruitment began in June 2021.

COVID-19 Impacts to Safe, Clean Water Grants Program

In March 2020, the Santa Clara County Public Health Officer issued countywide guidance to slow the spread of COVID-19 in our community. The countywide guidance included a shelter-in-place order and other restrictions, which impacted many grant projects, especially those interfacing with the public and involving work outdoors. Valley Water staff continued to support grantees in navigating project implementation during the pandemic in FY21. Grantees found creative ways to continue their project activities; however, many of the grantees could not perform many project tasks due to social distancing mandates in FY21.

Staff continues to receive and process several time-extension requests, schedule adjustment inquiries and delays to agreement executions due to the impacts of COVID-19. The Board approved longer agreement terms for FY21 grants to account for COVID-related delays. Staff will continue to monitor these projects and work with grantees to address these unforeseen changes.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water

Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project D4

Fish Habitat and Passage Improvement

This project helps restore and maintain healthy steelhead trout populations by improving fish passage and habitat. Possible work sites include Alamitos Creek at Lake Almaden and Ogier Ponds in the Coyote watershed, where man-made creek alterations disrupt fish migration. The project also includes studies of steelhead streams throughout the county to determine where improvements are needed to support spawning, rearing and migration. Funding also pays for the development of a program to use large woody debris to create fish habitat.

Benefits

- Improves spawning and rearing habitat within the Coyote, Guadalupe and other watersheds
- Improves steelhead trout habitat
- Helps provide required mitigation for environmental impacts of reservoir and recharge operations and for countywide Stream Maintenance Program

Key Performance Indicators (15-year Program)

1. Complete planning and design for 2 creek/lake separations.
2. Construct 1 creek/lake separation project in partnership with local agencies.
3. Use $6 million for fish passage improvements.
4. Conduct study of all major steelhead streams in the county to identify priority locations for installation of large woody debris and gravel as appropriate.
5. Install large woody debris and/or gravel at a minimum of 5 sites (1 per each of 5 major watersheds).

Geographic Area of Benefit: Countywide

Large woody debris at Los Gatos Creek (post-construction).

ADJUSTED

Project D4 FY21 Highlights

Creek/Lake Separation:

- Valley Water Board certified the Final EIR for Almaden Lake Improvement Project.
- Completed 60% design for the Almaden Lake project.
- Board selected the Almaden Lake project as the project to be constructed under KPI #2.
- Valley Water provided County Parks a preliminary plan to remove Coyote Creek from the Ogier Ponds complex.

Fish Passage Improvements:

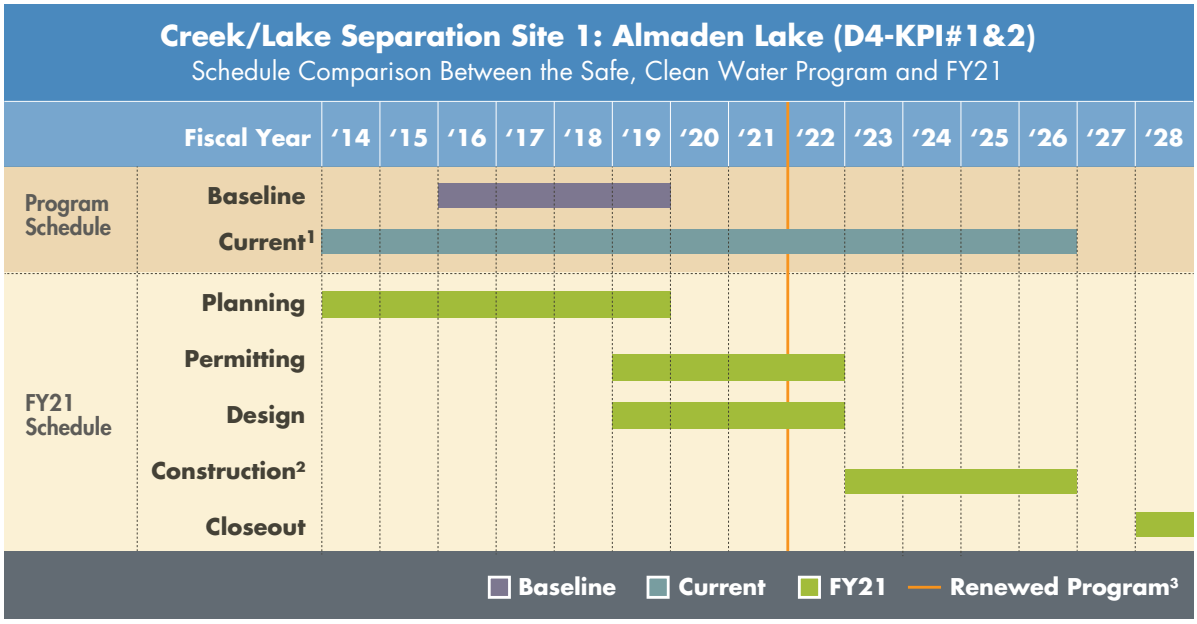
- Board approved a $1 million cost-share agreement with the City of San José to fund construction of the Singleton Road Fish Passage Project.
- The City of San José advertised the the Singleton Road Fish Passage Project for construction.
- Bolsa Road Fish Passage Project construction to begin in FY22.

Fish Habitat Improvements:

- Second phase of the large woody debris and gravel augmentation study completion delayed to FY22 due to COVID-19.
- Completed 30% design for the Uvas Creek Fish Habitat Improvement Project.

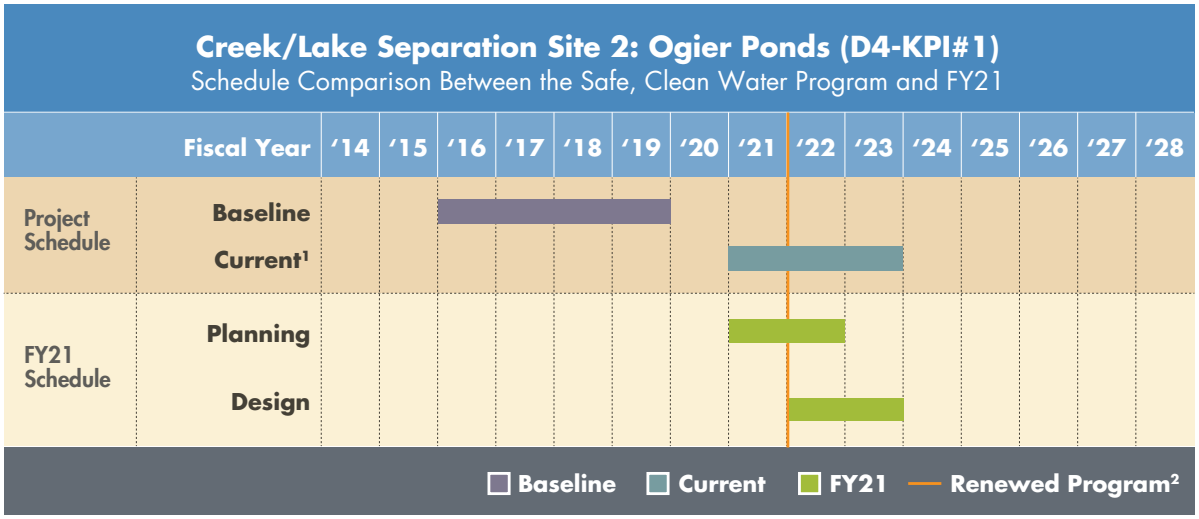
Schedule

Site 1: Almaden Lake



[1] Board approved a schedule adjustment through the change control process in FY19, FY20 & FY21.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 Program. The project schedule after this point is determined by activities in the renewed program.

Site 2: Ogier Ponds



[1] Board approved a schedule adjustment through the change control process in FY19 and FY20.
[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 Program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ADJUSTED

View of the existing Almaden Lake Park, looking north at Coleman Road bridge, along approximate proposed new levee location.

Status for FY21: ADJUSTED

(Schedule Adjustment)

Progress on KPI #1:

Creek/Lake Separation Site 1: Almaden Lake

The Valley Water Board certified the Final EIR in May 2021. At that time, the Board also selected the Almaden Lake Improvement Project as the project to be constructed under Project D4 KPI #2. In FY21, Valley Water completed the 60% design plans, specifications and cost estimate. With the Board's approval for the project to be constructed, staff will be submitting resource agency permit applications and continue to work with the City of San José on the project design and the new park area. Valley Water will continue to proceed to 90% and 100% design. Pending permit acquisition, construction could start in FY23.

Creek/Lake Separation Site 2: Ogier Ponds

Valley Water agreed to a final Memorandum of Agreement (MOA) provided by County Parks in September 2020. However, in January 2021, the MOA was not completed as County Parks was considering Ogier Ponds with respect to other projects, including the Anderson Dam Retrofit Project. In May 2021, Valley Water provided County Parks with a preliminary conceptual plan to separate Coyote Creek from the Ogier Ponds complex. Valley Water is targeting County approval of the MOA in FY22. The project team has started preliminary planning tasks in advance of the executed MOA. Meanwhile, the project, which is continued in the renewed Safe, Clean Water and Natural Flood Protection Program, has a new implementation target under the 5-Year Implementation Plan Fiscal Years 2022-2026 (***tinyurl.com/SCW5YrPlanFY22-26***).

Progress on KPI #2:

On May 11, 2021, the Valley Water Board selected the Almaden Lake project to receive construction funding from the Safe, Clean Water Program. Valley Water completed the 60% design plans, specifications, and cost estimate in FY21, and staff will continue to proceed to 90% and 100% design. Pending permit acquisition, construction could start in FY23.

Progress on KPI #3:

Fish Passage Improvements

- In FY19, Valley Water fully developed design plans, conducted the CEQA analysis and applied for permits to implement the Bolsa Road Fish Passage Project. While the project maintains its fish passage benefits, as a result of consultations with in-house fisheries biologists and environmental planners as well as the regulatory permitting agencies, the project design was changed to include geomorphic design features that will restore stability and stream function. In response, the Board approved funding construction through Project D6 Creek Restoration and Stabilization.
- The project consists of the installation of a gradually sloped riffle-pool system along approximately 1,700 linear feet of Uvas-Carnadero Creek to restore the stream invert due to decades of channel incision and base lowering, and to steadily elevate the stream over existing fish passage barriers, including a Union Pacific Railroad (UPRR) crossing support slab and a dysfunctional Denil fish ladder that was previously installed to bypass the UPRR crossing. This stream channel restoration approach to improve the fish passage also avoids retrofitting the existing slab associated with the Union Pacific Railroad (UPRR) bridge, i.e., no excavation near the bridge foundations.
- In FY21, the project construction was pushed back by a year to begin construction in FY22 due to design changes necessary to incorporate the permanent access ramps required by Valley Water Operations and Maintenance (O&M) for maintenance purposes. The design change required a tree survey, which was delayed due to poor air quality associated with the fires in the summer. As a result, the design staff did not have adequate time to coordinate with O&M and survey teams to design and determine the location of the permanent access ramps, renegotiate the permits to update from temporary to permanent ramps, update the bid documents, and release the bid in FY21. The project construction is now scheduled to begin in spring of 2022 (FY22) and be completed in FY23.
- In FY21, Valley Water provided engineering design and environmental permitting assistance to the City of San José for the Singleton Road Fish Passage Project on Coyote Creek. The interim project will replace a significant fish passage barrier at Singleton Road and Coyote Creek with a flat car bridge to improve steelhead migration and improve the City of San José's trail system. The project will be owned and maintained by the City of San José.
- In May 2021, Valley Water Board approved a $1,000,000 cost-share agreement between Valley Water and the City of San José to fund project construction.
- In May 2021, the City of San José advertised the project for construction in summer 2021.

Progress on KPI #4:

Fish Habitat Improvements

The second phase of the study to identify priority locations for gravel augmentation and large woody debris placement is underway and completion of the study is delayed till FY22 because the COVID-19 pandemic impacted field work scheduled during spring and summer 2020. The consultant nearly completed with identification of recommended high-priority locations for future large woody debris and gravel augmentation (LWDGA) projects

using selection criteria based on biological, geomorphic and flood risk consideration as well as site visits, for recommended locations covering Llagas, Pacheco, Los Trancos, San Francisquito, and Calero Creeks and Pajaro River.

Progress on KPI #5:

Fish Habitat Improvements

In August 2019, Valley Water completed the construction of the Los Gatos Creek Large Woody Debris Placement and Gravel Augmentation Project, located just downstream of Highway 17, in the City of Campbell. The project is among the priority locations recommended in Phase 1 of the LWDGA study. At the June 23, 2020, meeting, the Board approved recommended amendment to the existing consultant agreement with AECOM for the second phase study of LWDGA to provide additional funding for AECOM to provide design and construction support for the implementation of LWDGA projects along Uvas Creek and other fish habitat improvement projects. AECOM has submitted the 30% design plans for the Uvas Creek Fish Habitat Improvement Project and is expected to complete the rest of the design work in early FY22. Implementation, which was originally targeted for summer 2021, has moved to FY22 or FY23 in order to receive the USACE Section 408 permit approval that was not previously required for SMP projects.

Financial Information

In FY21, 76% of the annual project budget was expended.

The Almaden Lake Improvement Project (KPI #1) expended 102% of its annual budget with certification of the Final EIR and 60% design completed.

The Ogier Ponds Planning Study (KPI #1) expended 9% of its annual budget, as the Memorandum of Agreement with the County is yet to be completed. In FY18, the Board approved a budget adjustment to complete the study.

KPI #2 to construct one (1) creek/lake separation project had no expenditure in FY21 because it was in May 2021 that the Board decided that the Almaden Lake Improvement Project will receive construction funding from the Safe, Clean Water Program.

The Fish Passage Improvement Project (KPI #3) expended approximately 91% of its annual budget. The under expenditure was due in part to the delay in starting construction of the Bolsa Road Fish Passage Project resulting from a change in design. Construction on the Bolsa Road Fish Passage Project is expected to begin in FY22 and be completed in FY23.

The Fish Habitat Improvement project (KPIs 4 and 5) expended 42% of its annual budget. Due to Section 408 permitting challenges, construction funds for the Uvas Creek Fish Habitat Improvement Project were not utilized in FY21.

Financial Summary ($ Thousands)
D4. Fish Habitat and Passage Improvements

Fiscal Year 2020–2021									15-year Program	
Project No. and Name	Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
					Actual	Encumbrance	Total			
26044002 Fish Passage Improvement	$0	$1,930	$0	$1,930	$1,754	$0	$1,754	91%	$8,770	61%
26042002 Fish Habitat Improvement	$696	$0	$0	$696	$242	$48	$289	42%	$5,828	48%
26044001 Almaden Lake Capital Project	$1,710	$0	$0	$1,710	$1,335	$411	$1,746	102%	$31,314	21%
26044003 Ogier Ponds Planning Study	$0	$739	$0	$739	$65	$0	$65	9%	$4,253	10%
Total	**$2,407**	**$2,669**	**$0**	**$5,076**	**$3,395**	**$459**	**$3,854**	**76%**	**$50,165**	**30%**

Opportunities and Challenges

Schedule Adjustments

Site 1: Almaden Lake

Valley Water completed the Final EIR in FY21. The COVID-19 pandemic caused delays in FY20 to complete the necessary geotechnical investigations that are required to complete the project design, which delayed project 60% design completion in FY21. With certification of the Final EIR and approval of the project for construction, resource agency permit applications will be submitted in summer 2021. Valley Water will continue to progress design to 90% and 100%. Final construction documents will need to incorporate any permit requirements. Pending permit acquisition, construction will start in FY23.

Site 2: Ogier Ponds

On March 23, 2019, the Board approved the Ogier Ponds schedule with planning and design to be completed in FY23. This completion date is contingent on the execution of a Memorandum of Agreement with the landowner, Santa Clara County Parks. The Board recommended moving the project into planning provided, the landowner agree to continue the partnership into the next phase of planning. In FY21, Valley Water continued working with County staff on such an agreement. Once the agreement is executed, formal planning work will commence, followed by design work.

Resource Needs

Fish barrier mitigation and creek/lake separation projects will continue to require a high amount of resources to maintain the level of stakeholder engagement necessary for project success.

Fish Habitat Improvements

The placement of any additional gravel or large woody debris (LWD) structures has the potential to increase water surface elevation in a stream. One of the challenges for considering gravel and LWD additions for habitat improvements is that for channel reaches in a Federal Emergency Management Agency (FEMA)-designated regulatory floodway, any changes to the channel configuration must not increase the water surface elevation beyond existing condition, irrespective of the proximity to structures or bank elevations. This restriction may make the design and construction of habitat enhancement more difficult, requiring the production of a "No Rise" certification. This certification is often costlier as it will require more detailed hydraulic evaluation and may also require more earthwork to meet the "No Rise" certification standards.

Confidence Levels

Site 1: Almaden Lake

Schedule: Moderate confidence

Valley Water completed the Final EIR in FY21. The COVID-19 pandemic caused delays in FY20 to complete the necessary geotechnical investigations that are required to complete the project design, which delayed project 60% design completion in FY21. Resource agency permit applications will be submitted in summer 2021. Valley Water staff will continue to progress design to 90% and 100%. Final construction documents will need to incorporate any permit requirements. Pending permit acquisition, construction to start in FY23.

Funding: High confidence

The Safe, Clean Water funding covers the cost of the planning, design and construction phases.

Permits: Moderate confidence

Valley Water anticipates some challenges with the acquisition of the regulatory permits for this project and is moderately confident it will receive the permits necessary to complete construction of this project. Valley Water will conduct stakeholder meetings with the regulators.

Jurisdictional Complexity: High confidence

Coordination with the City of San José is ongoing. This project is located on City of San José and Valley Water property and these entities have a longstanding partnership for the operation and maintenance of Almaden Lake and Almaden Lake Park.

Site 2: Ogier Ponds

Schedule: Moderate confidence

Valley Water does not own the property and cannot proceed with the planning phase until an MOA with County Parks is signed. The planning study area will be affected by the Anderson Dam project, which is expected to convey higher than typical creek flows and deliver higher than typical sediment during the multi-year dam reconstruction.

This will significantly complicate the planning and design phases for the Ogier Ponds project and may delay approval of the MOA

Funding: High confidence

The Safe, Clean Water funding covers the cost of the planning and design phases.

Permits: N/A

The confidence level for permits will be determined if the project moves past the planning phase.

Jurisdictional Complexity: Moderate confidence

The project includes a high level of regulatory engagement as there are numerous listed species at the site; however, the primary objective is stream restoration, which is expected to reduce regulatory challenges. The project is dependent on an MOA with County Parks.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project D5

Ecological Data Collection and Analysis

This project creates a comprehensive watershed database that tracks stream ecosystem conditions to help Valley Water, other County agencies and organizations make informed watershed and asset management decisions. This new information integrates and enhances Valley Water's stewardship actions through a standardized, repeatable and defensible approach that guides, organizes and integrates information on stream conditions.

This ecological monitoring and assessment is conducted on an ongoing basis and is shared with land use agencies, environmental resource groups, and the public to support efficient restoration decisions throughout the county.

Conducting CRAM in the Coyote Creek watershed, summer 2020.

ON TARGET

Project D5 FY21 Highlights

- Completed the first reassessment of the Coyote Creek Watershed.

Benefits

- Improves watershed and asset management decisions
- Provides a systematic, scientific guide for decisions and actions to improve stream conditions
- Supports effective design options for capital projects
- Maximizes the impact of restoration dollars with more reliable data on countywide stream conditions

Key Performance Indicators (15-year Program)

1. Establish new or track existing ecological levels of service for streams in 5 watersheds.
2. Reassess streams in 5 watersheds to determine if ecological levels of service are maintained or improved.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

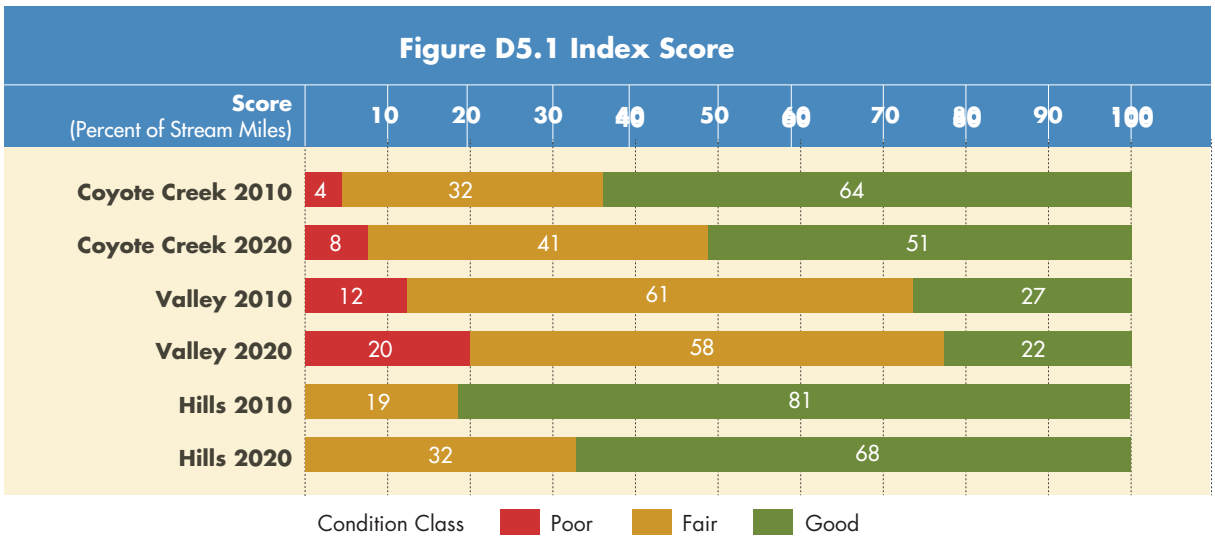
Status for FY21: ON TARGET

Progress on KPI #1: (Completed in FY18)

From 2010 to 2018 (FY11 to FY19), baseline ecological conditions were measured across Valley Water's five watersheds (Coyote, Guadalupe, Lower Peninsula, Pajaro (Uvas/Llagas), and West Valley) using the California Rapid Assessment Method (CRAM, see ***https://www.cramwetlands.org***). In FY20, Valley Water and the San Francisco Estuary Institute evaluated the 325 field assessments from all five watersheds done over the eight years in a comprehensive synthesis report. All six (6) of the watershed assessment reports and more information are available on the project webpage (***https://www.valleywater.org/project-updates/creek-river-projects/d5-ecological-data-collection-and-analysis)***, under the News & Updates section. Stream ecological condition assessments and data conducted by others throughout California are also available under the Reports & Documents section.

Valley Water implements the project in accordance with the Wetland and Riparian Area Monitoring Plan (WRAMP) framework recommended by the United States Environmental Protection Agency and endorsed by the California Water Quality Monitoring Council. The results are entered on EcoAtlas, which allows the public to view the proportion of stream resources in good, fair or poor condition for a watershed or any area of interest of choosing using its Landscape Profile tool (***https://www.ecoatlas.org/***).

Figure D5.1 Percent of stream miles in good, fair and poor condition through the Coyote Creek watershed in 2010 and 2020.



Progress on KPI #2:

The first reassessment of the Coyote Creek watershed was completed in FY21 with field work from July through October of 2020, 10 years after its first assessment in August and September 2010. This is the first ambient watershed reassessment conducted using CRAM in the state. Statistically, overall stream conditions in the Coyote watershed did not change from 2010 to 2020. It remains in good condition at the watershed scale, but barely. Conditions appeared to decline slightly, however, change was within the 95% confidence levels, thus not statistically significant. Figure D5.1 shows the proportions or percent of stream miles in poor, fair and good ecological condition in 2020 compared to 2010. The watershed was divided into the headwaters and lower urban and agricultural areas, where Valley Water primarily works, as defined by the Stream Maintenance Program (SMP) permitted limit below the 1,000-foot elevation contour (SMP Area). Similar to watershed-wide conditions, there were no statistical differences in the overall condition of the SMP Area from 2010 to 2020. The

Coyote watershed reassessment report on the project webpage has more detailed analyses and information.

The CRAM data collected under the project was fundamental to developing CCNEET, described as the Coyote Creek Stream Corridor Priority Plan in Project D3:Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails. CCNEET, which is also hosted on EcoAtlas, was motivated by a recognized need for a coordinated, science-based process to identify and justify where and how to conduct habitat improvements along the creek with the goal of using a watershed approach to environmental protection, permitting and stewardship. It also fulfills two priority actions identified in the One Water Coyote Creek Watershed Plan - Enhance Riparian and Aquatic Habitat along Upper Coyote Creek and Enhance Riparian and Aquatic Habitat along Middle Coyote Creek. FY21 work on CCNEET included maintenance, enhancements, partner training and outreach. Continued advancements involved coordination with Santa Clara County Parks, CCNEET introductions and trainings with the Santa Clara Valley Habitat Agency, Guadalupe Coyote Resource Conservation District and the Loma Prieta Resource Conservation District.

Financial Information

In FY21, approximately 121% of the annual project budget was expended.

The project was overspent due to the utilization of FY21 funds for the partnership agreement with the Aquatic Science Center/San Francisco Estuary Institute and having a larger volume of work to reassess the Coyote watershed, the first to be reassessed under KPI #2. The partnership agreement was approved in March 2020, however, payments were made from the FY21 budget. This resulted in underspending in FY20 (38%) and overspending in FY21.

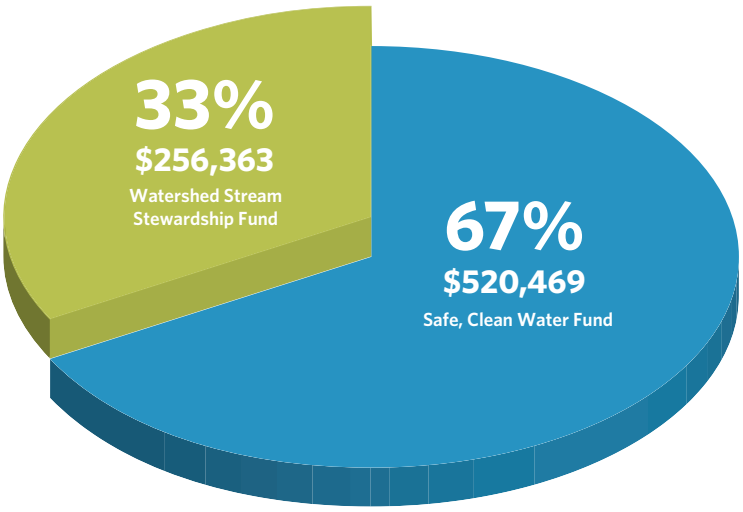
Financial Summary ($ Thousands)
D5.2 Ecological Data Collection and Analysis

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$520	$0	$520	$582	$49	$631	121%	$9,020	37%

Figure D5.3

D5 Ecological Data Collection and Analysis

Total FY21 Project Budget: $776,859



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure D5.3 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

Opportunities and Challenges

Watershed Approach to Environmental Permitting, Impact Assessments and Mitigation

Valley Water has been applying CRAM to assess flood and restoration projects, starting with pre-project stream condition scores and planning post-project comparisons. The assessments align closely with the State Water Resources Control Board (SWRCB) Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), which became effective on May 28, 2020, to regulate work in streams and their wetlands under Section 401 of the Clean Water Act, and Porter-Cologne Water Quality Control Act. The Procedures ensure that mitigation planning is based on a watershed approach. Information and analysis of the abundance, distribution, diversity and condition of aquatic resources is required, and CRAM is considered an appropriate assessment method to provide some of these required data. The watershed reports and EcoAtlas provide this information to resource agencies and the public and have watershed-specific stream condition statistics that can be compared to CRAM results.

Several of Valley Water's One Water Plan targets are closely aligned with the Project D5 watershed assessments and CRAM metrics. One Water is used to plan projects, grants and other activities with D5 data presenting how environmental uplift or improvement may be achieved. The CRAM results can also predict potential environmental degradation, then be applied to avoid, minimize or mitigate impacts.

Partnerships, Resource Agency, Conservation Group and Landowner Coordination

Valley Water does not own substantial amounts of land at the watershed scale. Only 8% of the Coyote watershed stream miles are Valley Water owned or under easement. Also, Valley Water can only manage creek flows in the SMP Area below Coyote and Anderson Reservoirs within flow limitations of the infrastructure, compliance with water rights and resource agency permits, while providing adequate water supply for multiple users and

the environment. As a result, Valley Water needs the assistance of, and to work cooperatively with water users, landowners, land managers, creekside neighbors, resource agencies, environmental organizations, stakeholders, and citizen groups to maintain and improve ecological conditions and watershed health.

Climate Change, Drought and Wildfire

The frequency and intensity of drought increased from 2000 to 2021. Mega-droughts spanning multiple decades have occurred in California's past and the 2012 to 2016 drought was likely the most severe drought in the last 1,200 years (see Valley Water's Climate Change Action Plan at ***https://www.valleywater.org/your-water/water-supply-planning/climate-change-action-plan***.)

From August 18 to October 1, 2020, the SCU Lightning Complex wildfires burned approximately 28,000 acres, 12% to 13% of the Coyote watershed. The watershed reassessment had either completed field work prior to the wildfires or could not access a few sites, so assessed statistically selected replacement sites where landowner permission was granted. Despite the large area burned, mostly in the headwaters, soil burn severity measured by CalFire was low to very low (90%) with moderate (10%) and high severity (two acres) not so widespread. Valley Water has been examining wildfire effects in cooperation with the California Department of Fish and Wildlife, California Native Plant Society, and University of California. Understanding the impacts or benefits to watershed condition from the wildfires depends on years of vegetation regrowth and any possible erosion, sedimentation, nutrient inputs to creeks, etc. Observing long-term effects will be part of the next Coyote watershed reassessment in 2030 or 2035 under the renewed Safe, Clean Water and Natural Flood Protection Program.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project D6

Creek Restoration and Stabilization

This project will use geomorphic data to design and construct projects to increase the stability of eroding creek banks and help restore the natural functions of stream channels. Possible work may include the removal of Comer Debris Basin on Calabazas Creek in Saratoga, and activities to reduce and prevent incision and promote sediment balance in Stevens and Uvas creeks.

Benefits

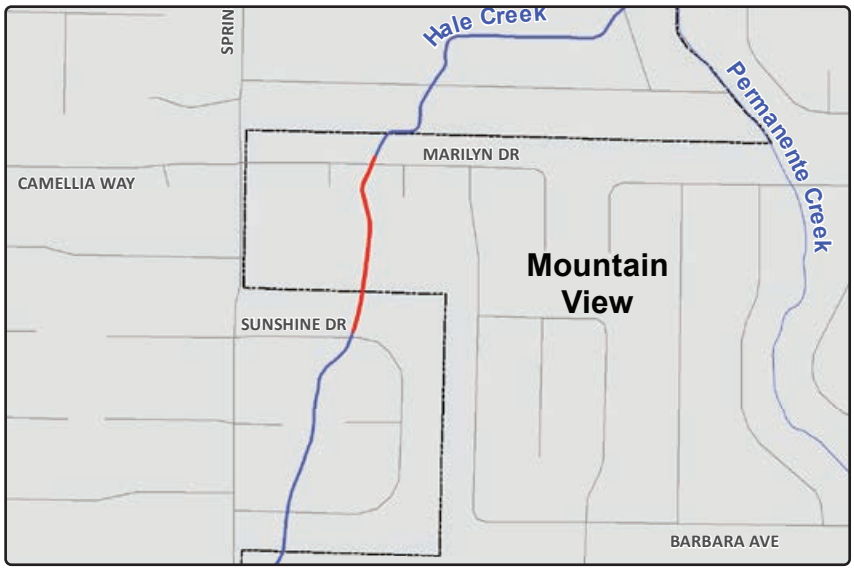
- Uses scientific principles to restore sediment balance and reduce erosion, instability and sedimentation in creeks
- Helps restore stream functions and improves recharge capacity of channels by decreasing sedimentation
- Protects roads from damage caused by eroding channel banks
- Reduces annual maintenance cost for sediment removal

Key Performance Indicator (15-year Program)

1. Construct 3 geomorphic designed projects to restore stability and stream function by preventing incision and promoting sediment balance throughout the watershed.

Geographic Area of Benefit: Countywide

Project Location



Legend

- Hale Creek Project Location
- Santa Clara County Cities

Rendering of the Hale Creek pilot project's natural channel design.

ADJUSTED

Project D6 FY21 Highlight

Site 1: Hale Creek Enhancement Pilot Project

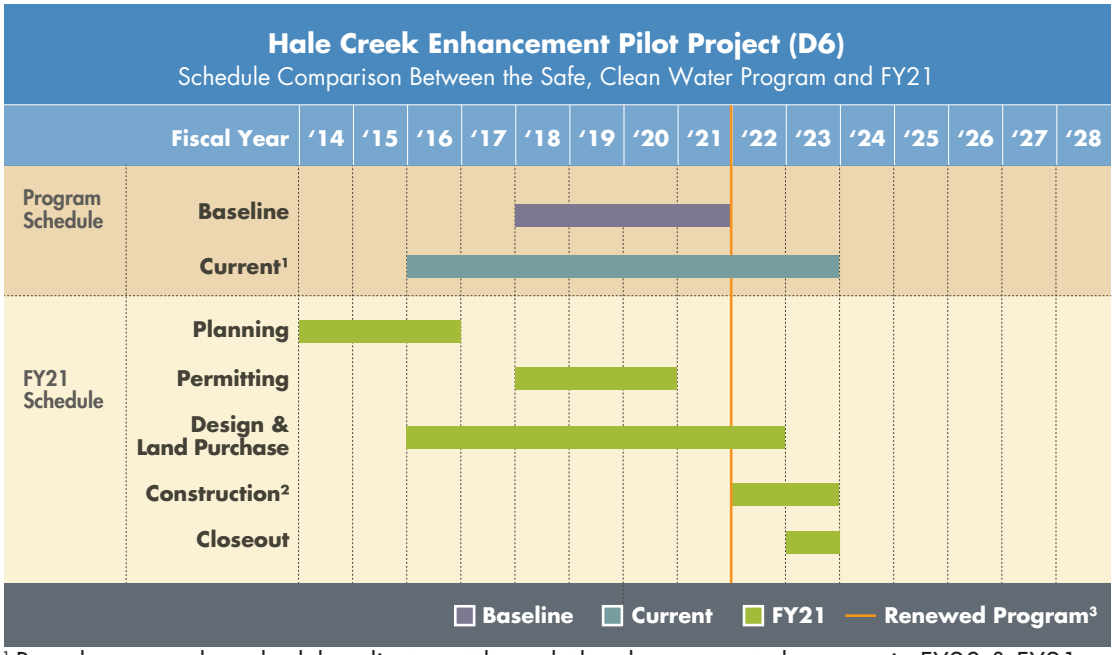
- Completed 100% plans and specifications as part of the design process by implementing design changes to minimize impacts to adjacent residents.
- Obtained Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board; and a Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife.

Site 2: Bolsa Road Fish Passage Project

- Because of required design changes for maintenance purposes, construction rescheduled to begin in FY22.

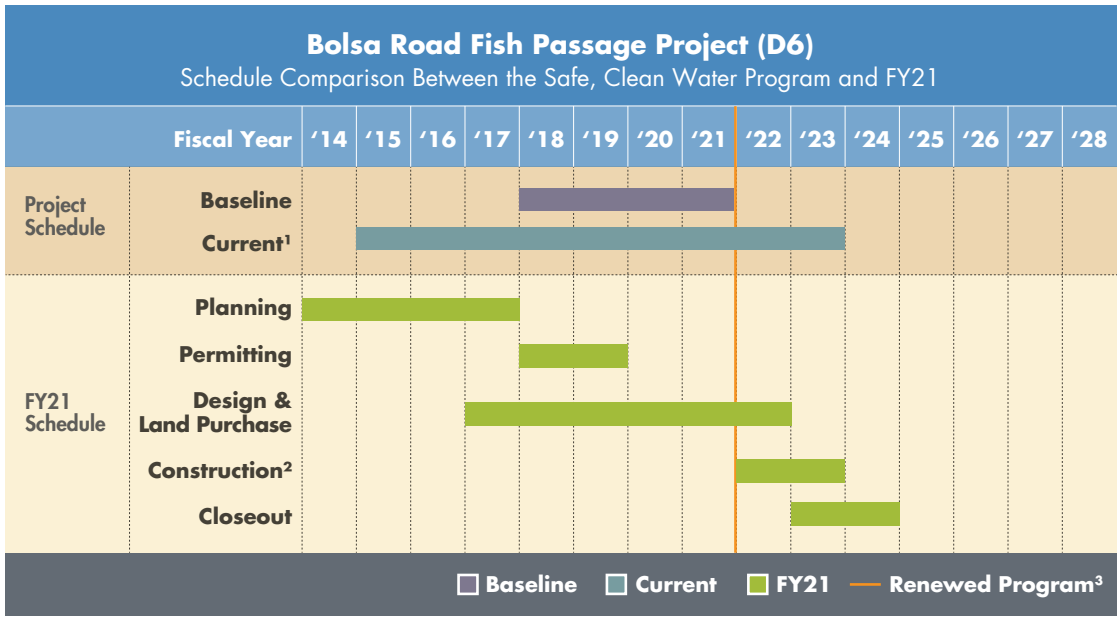
Schedule

Site 1: Hale Creek Enhancement Pilot Project



[1] Board approved a schedule adjustment through the change control process in FY20 & FY21.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 Program. The project schedule after this point is determined by activities in the renewed program.

Site 2: Bolsa Road Fish Passage Project



[1] Board approved a schedule adjustment through the change control process in FY20 & FY21.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 Program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	SCHEDULED TO START
FY 15	SCHEDULED TO START
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ADJUSTED

Status for FY21: ADJUSTED (Schedule Adjustment)

Progress on KPI #1:

- In FY16, Valley Water selected the Hale Creek Enhancement Pilot Project as the first of three (3) geomorphic designed projects to be constructed.
- In FY19, Valley Water selected the Bolsa Road fish passage project on Uvas Creek as the second design project to restore stability and stream function.

Site 1: Hale Creek Enhancement Pilot Project

- The first of the geomorphic designed projects is the Hale Creek Enhancement Pilot Project, which includes restoration and stabilization of a 650-foot section of the concrete-lined channel on Hale Creek, between Marilyn Drive and North Sunshine Drive on the border of Mountain View and Los Altos. In coordination with the San Francisco Bay Regional Water Quality Control Board (RWQCB), this project has been prioritized and selected for a pilot study to restore geomorphic creek features in a confined urbanized setting. In FY21, Valley Water completed 100% plans and specifications as part of the design process by implementing design changes to minimize impacts to adjacent residents. For detailed information about the geomorphology and project design, view the Hale Creek Enhancement Pilot Project planning study memo online: ***www.valleywater.org/HaleCkPlanningMemo***
- The project will be advertised for construction in 2022, with construction expected to begin in spring 2022 (FY22) and be completed by the end of 2022 (FY23).

Site 2: Bolsa Road Fish Passage Project

- This project was originally planned and designed as one of the fish passage improvement projects under Project D4: Fish Habitat and Passage Improvement. While the project maintains its fish passage benefits, as a result of consultations with in-house fisheries biologists and environmental planners as well as the regulatory permitting agencies, the project design was changed to include geomorphic design features that will restore stability and stream function. In response, the Board approved funding construction through Project D6: Creek Restoration and Stabilization.
- The Bolsa Road Fish Passage Project consists of the installation of a gradually sloped riffle-pool stream complex along approximately 1,700 linear feet of Uvas-Carnadero Creek in unincorporated Santa Clara County, just

south of Gilroy. The purpose of the project is to restore the stream invert due to decades of channel incision and channel bottom lowering and to steadily elevate the stream bottom over existing fish passage barriers, including a Union Pacific Railroad (UPRR) crossing support slab as well as a dysfunctional Denil fish ladder that was previously installed to bypass the UPRR crossing.

- In FY21, the project construction was pushed back by a year to begin in FY22 due to design changes necessary to incorporate the permanent access ramps required by Valley Water Operations and Maintenance (O&M) for maintenance purposes. The design change required a tree survey, which was delayed due to poor air quality associated with the fires in the summer. As a result, the design staff did not have adequate time to coordinate with O&M and survey teams to design and determine the location of the permanent access ramps, renegotiate the permits to update from temporary to permanent ramps, update the bid documents, and release the bid documents in FY21.
- The project construction is now scheduled to begin in FY22 and be completed in FY23. For detailed information about the geomorphology and project design, view the Bolsa Road Fish Passage Improvement Project Basis of Design report at ***tinyurl.com/BolsaRdBasisOfDesign***.
- Meanwhile, the San Francisco Bay Regional Water Quality Control Board (RWQCB) issued a Water Quality certification on April 26, 2019, the U.S. Army Corps of Engineers (USACE) issued a permit on June 6, 2019, and the California Department of Fish and Wildlife (CDFW) issued the final Streambed Alteration Agreement on January 23, 2020.

Financial Information

Site 1: Hale Creek Enhancement Pilot Project

In FY21, 22% of the annual project budget was expended.

The under expenditure was because the FY21 project budget included funds for construction, which was pushed back by a year to begin in FY22. Delay was caused by the need to finalize construction coordination with some property owners.

Financial Summary ($ Thousands)
D6. Hale Creek Enhancement Pilot Project

Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Bduget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$170	$2,719	$0	$2,889	$643	$0	$643	22%	$8,993	31%

Site 2: Bolsa Road Fish Passage Project

Since the planning and design for this project was carried out under D4: Fish Habitat and Passage Improvement, the

FY21 budget allocation for construction was included under Project D4, which was to be reimbursed in accordance with the Board's FY19 decision that the project construction be funded by D6. In FY21, the project construction schedule was pushed back by a year to begin in FY22 in order to incorporate in the bid documents the design for the permanent access ramps required for maintenance purposes.

Opportunities and Challenges

Site 1: Hale Creek Enhancement Pilot Project

Schedule Adjustment

In FY21, the project schedule was adjusted, pushing the project construction by a year to begin in FY22 and complete in FY23. The project construction was deferred due to several reasons listed below:

1. Allow time for coordination with property owners to obtain temporary construction easements; and

2. Find solutions in coordination with PG&E to minimize or eliminate loss of power to adjacent properties during construction.

Confidence Levels

Schedule: Moderate confidence

This section of Hale Creek is bordered by seven (7) private residential properties and a church parking lot. The ability to resolve potential mis-aligned fences and obtain the necessary temporary easements for construction will be critical for project success. Valley Water conducted outreach to the project neighbors and continues to work closely with them to obtain temporary construction easements.

Funding: High confidence

Project funding has been secured through the Safe, Clean Water Program.

Permits: High confidence

Valley Water has received the RWQCB permit for this project.

Jurisdictional Complexity: High confidence

This project is on the border of Mountain View and Los Altos, and both cities have been supportive of the project. During the design phase, Valley Water has coordinated with both cities on an as needed basis, and as the project transitions into the construction phase, Valley Water will collaborate more closely with both cities.

The work is being done on existing Valley Water right-of-way and easements and additional temporary construction easements will be required to build the project from adjacent property owners. Furthermore, PG&E overhead electric lines cross and run along the creek in several locations. Valley Water continues to coordinate with PG&E and revise the design as necessary to ensure this project can be constructed while minimizing impacts to utility services to adjacent residents.

Site 2: Bolsa Road Fish Passage Project

Schedule Adjustment

In FY21, the project construction schedule was adjusted, delaying construction start by a year to begin in FY22 and complete in FY23. The schedule was adjusted primarily due to design changes to incorporate the permanent access ramps required by Valley Water O&M.

Confidence Levels

Schedule: High confidence

All work items for the Bolsa Road Fish Passage project are within Valley Water's maintenance easement. Permission to Enter agreements with adjoining commercial properties were executed in May 2019 for the contractor to access the project site safely on the south bank to avoid the busy traffic along Bolsa Road. Valley Water has received cooperation from the adjoining project neighbors.

Funding: High confidence

Project funding has been secured through the Safe, Clean Water Program.

Permits: High confidence

Valley Water has received permits from the RWQCB, USACE, and CDFW has issued the final Streambed Alteration Agreement for the project. Permit amendments to include the O&M permanent access ramps in the design will be secured in FY22.

Jurisdictional Complexity: High confidence

Valley Water has received cooperation from the adjoining project neighbors and secured Permission to Enter agreements for construction from project neighbors that will be extended to the end of 2025 to cover postponement of the project construction to next season and post-construction vegetation management. This project footprint was modified slightly to avoid encroaching on UPRR right-of-way as the UPRR disagreed with Valley Water's evaluation of impact to drainage under the UPRR bridge.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project D8

South Bay Salt Ponds Restoration Partnership

This project reuses local sediment from streams flowing into San Francisco Bay to create and rehabilitate habitat in the South Bay Salt Ponds Restoration. Valley Water reuses sediment that has to be removed from streams to maintain their capacity to carry floodwaters. In partnership with the U.S. Fish and Wildlife Service (FWS), clean sediment is applied to appropriate locations to improve the success of the South Bay Salt Ponds Restoration effort.

Sediment stockpile to Pond A8.

ON TARGET

Project D8 FY21 Highlights

- Added 9,300 cubic yards of soil to the existing 10:1 slope at Pond A8 to protect the clay liner of the former landfill and support future 30:1 slope ecotone.

Benefits

- Accelerates progress of an important tidal wetland restoration project
- Reduces disposal costs for sediment that has been removed from local channels to maintain flood carrying capacity
- Increases space availability in local landfills

Key Performance Indicators (15-year Program)

1. Establish agreement with FWS to reuse sediment at locations to improve the success of Salt Pond restoration activities.
2. Construct site improvements up to $4 million to allow for transportation and placement of future sediment.

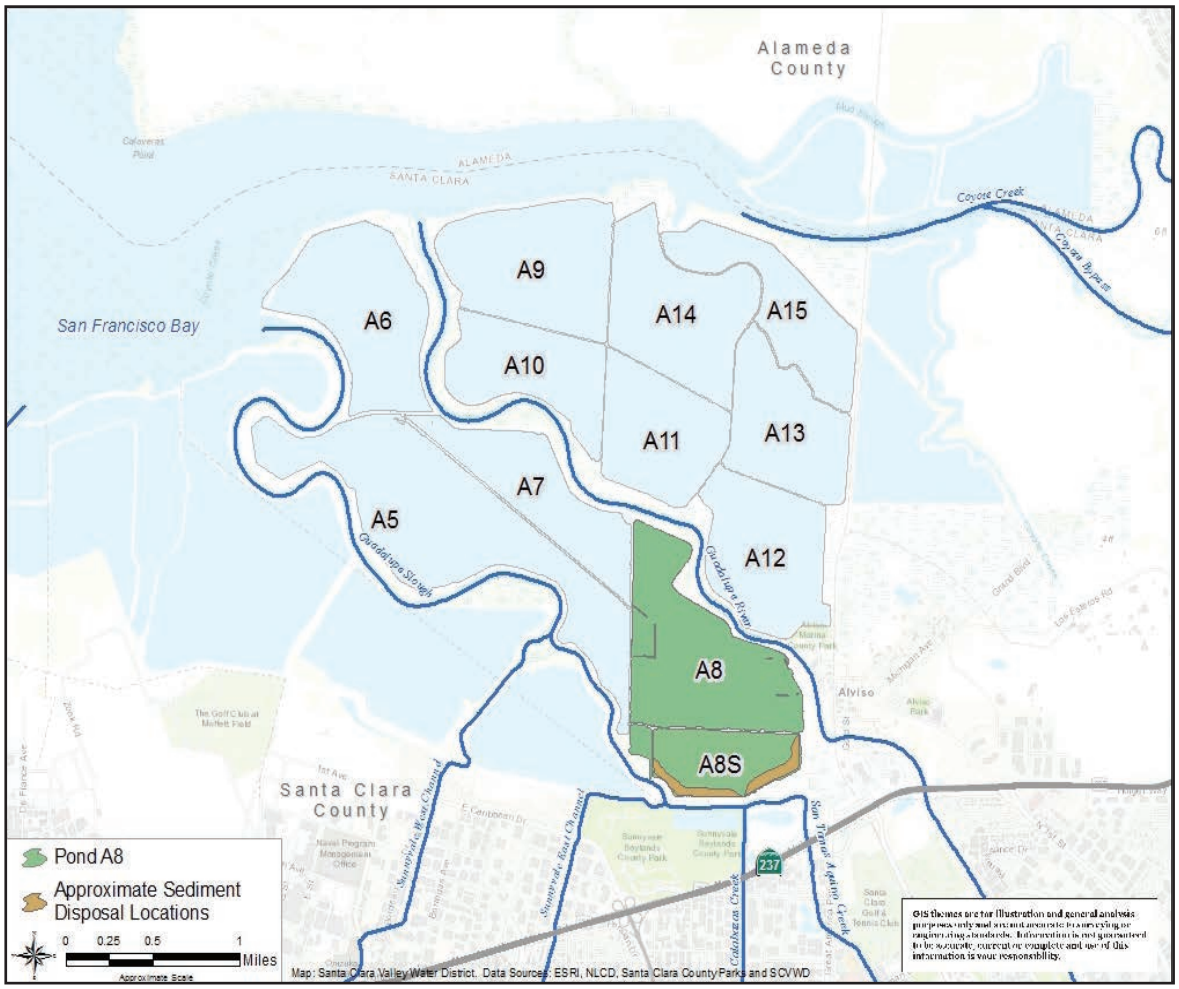
Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Project Location



Progress on KPI #1: (Completed in FY14)

In May 2019, Valley Water signed a new agreement with USFWS to replace the initial agreement that was signed in March 2014.

Progress on KPI #2:

In FY21, 9,300 cubic yards of soil from the SMP was added to the existing 10:1 slope at Pond A8 to protect the clay liner of the former landfill as well as support future 30:1 slope ecotone, gentle slope that will be a good substrate for marsh vegetation to grow.

Financial Information

In FY21, 105% of the annual project was expended.

Financial Summary ($ Thousands) D8. South Bay Salt Ponds Restoration Partnership									
Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Bduget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$0	$24	$0	$24	$25	$0	$25	105%	$4,398	7%

Opportunities and Challenges

Coordination with Project E1.2: Sediment Removal for Capacity

To the extent possible, Valley Water coordinates its sediment removal activities, funded in part by Sub-Project E1.2, with Project D8: South Bay Salt Ponds Restoration Partnership. More specifically, removed sediment that meets specific re-use criteria is delivered to USFWS-owned Pond A8 to provide suitable substrate (e.g. dirt, gravel, sand, etc.) on which marsh vegetation can grow.

Habitat Improvement

This project provides an important opportunity to assist the South Bay Salt Pond Restoration Program. The sediment is being used to construct a broad, gentle slope that will increase marshland acreage that absorbs energy during storm surges providing resilient flood protection and protects adjacent property, a former landfill from erosion, while providing habitat for many wetland species. After the slope is constructed, it will be revegetated with an appropriate array of native tidal marsh plant species and planting methods developed by the San Francisco Bay Bird Observatory with Valley Water funding.

Maximize Sediment Reuse

Because of the higher standards required to meet under the new Quality Assurance Project Plan (QAPP), Valley Water is unable to find enough soil that meets the thresholds as cover material. There is limited amount of soil that meets the foundation criteria and even less for cover and that limits our ability to deposit the soil at Pond A8. SBSPRP, USFWS and Valley Water staff are working with the Water Board to modify criteria for reuse material. Furthermore, Valley Water may also consider purchase of cover material.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 Program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

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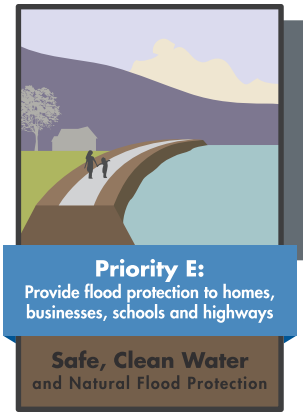


Priority E

Provide Flood Protection to Homes, Businesses, Schools and Highways

Flood protection measures under Priority E include capital construction projects, studies of flood prone areas, maintenance of existing flood protection channels and improvements to emergency planning for flood response.

Flood protection capital projects are prioritized to protect the largest number of people, homes and businesses, as well as safeguard the highways, streets, public transportation and business centers that people depend on for their livelihoods. At every opportunity, Valley Water takes a multi-benefit approach to flood protection projects, which includes incorporating water quality, water supply, environmental stewardship, and recreational enhancement benefits.

All the construction projects under Priority E are undertaken in partnership with the federal government, and will require federal funding in addition to local funding to complete the preferred scope. Should federal funding become scarce, a reduced scope would be implemented, as described in the individual project summaries.

Whenever possible, Valley Water also leverages funds from the state, local municipalities and other stakeholders.

Project E1: Vegetation Control and Sediment Removal for Flood Protection

Project E2: Emergency Response Planning

Project E3: Flood Risk Reduction Studies

Project E4: Upper Penitencia Creek Flood Protection
Coyote Creek to Dorel Drive – San José

Project E5: San Francisquito Creek Flood Protection
San Francisco Bay to Middlefield Road – Palo Alto

Project E6: Upper Llagas Creek Flood Protection
Buena Vista Avenue to Llagas Road – Morgan Hill, San Martin, Gilroy

Project E7: San Francisco Bay Shoreline Protection
Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

Project E8: Upper Guadalupe River Flood Protection
Highway 280 to Blossom Hill Road – San José

Sediment removal at Sunnyvale East Channel.

ON TARGET

Project E1 FY21 Highlights

- Maintained 90% of improved channels at design capacity.
- Completed 1,124.2 acres of in-stream vegetation management on 133.9 miles of streams countywide.
- Completed 12 sediment removal projects, removing 55,878 cubic yards of sediment to maintain design capacity.
- Completed 28.5 acres of in-stream vegetation management on Newly Improved Creeks to reduce flood risk on 1.2 miles of streams.
- Completed 2,948 acres of upland vegetation management.

Project E1

Vegetation Control and Sediment Removal for Flood Protection

This project supports Valley Water's ongoing vegetation control and sediment removal activities that reduce flood risk by maintaining design flow conveyance capacity of flood protection projects. These activities also provide access for maintenance personnel and equipment. The project includes: controlling in-stream vegetation growth, removing sediment at appropriate intervals, removing trees, and performing weed abatement and pruning to provide maintenance access and establish firebreaks. Before carrying out maintenance activities, Valley Water personnel perform biological pre-construction surveys to minimize environmental impacts. Allocations for Project E1 also helps fund future maintenance of flood protection projects completed under the Safe, Clean Water program.

This project is comprised of 4 sub-projects that support Valley Water's ongoing vegetation control and sediment removal activities. These sub-projects are:

E1.1 Vegetation Control for Capacity

E1.2 Sediment Removal for Capacity

E1.3 Maintenance of Newly Improved Creeks

E1.4 Vegetation Management for Access

Benefits

- Ensures that existing flood protection projects continue to provide maximum flood protection
- Provides safe access for maintenance of creek channels
- Reduces fire risk along creeks and maintains compliance with fire codes
- Improves water quality

Key Performance Indicators (15-year Program)

1. Maintain 90% of improved channels at design capacity.
2. Provide vegetation management for 6,120 acres along levee and maintenance roads.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

In FY21, 90% of improved channels were estimated as having been maintained at design capacity. Improved channels are those channels where Valley Water has fee or easement land rights and have been modified for flood protection purposes. This estimated percentage is based upon the identification of sediment and vegetation that compromise the flow conveyance capacity of channels. This identification occurs through routine maintenance inspections, following operations and maintenance manuals and stream maintenance guidelines, and review of as-built plans and specifications.

Valley Water continues to update stream maintenance guidelines, which will provide improved thresholds for sediment removal and vegetation management. These updated guidelines will better inform the inspection and maintenance process for Valley Water's flood protection assets. By the end of FY21, Valley Water completed 29 guidelines. Another 10 guidelines are anticipated to be completed by FY23, and Valley Water is currently on track to complete or update 40 stream maintenance guidelines by 2023.

E1.1 Vegetation Control for Capacity

Completed 1,124.2 acres of in-stream vegetation management to reduce flood risk on approximately 133.9 miles of streams throughout the county using an integrated combination of mechanical, hand labor and herbicide methods (Graph E1.1).

E1.2 Sediment Removal for Capacity

Completed 12 sediment removal projects, removing 55,878 cubic yards (CY) of sediment to maintain design capacity (Graph E1.2). The Safe, Clean Water Program funds 14% of this work. The following table includes the quantities of sediment removed from each watershed/creek, and a corresponding map can be found at: ***https://www.valleywater.org/project-updates/e1-vegetation-control-and-sediment-removal-flood-protection*** under "Reports and Documents."

Watershed	Creek	Sediment removed (CY)
Lower Peninsula	Stevens Creek	7,850
Lower Peninsula	Permanente Creek	50
West Valley	Regnart Creek (2 sites)	790
West Valley	San Tomas Aquino Creek	2,920
West Valley	Saratoga Creek	9,598
Guadalupe	Ross Creek	55
Coyote	Calera Creek	2,295
Coyote	Los Coches Creek	560
Coyote	Lower Silver Creek	22,680
Coyote	Thompson Creek	4,917
Uvas/Llagas (Pajaro)	Llagas Creek	4,163
TOTAL:		**55,878**

E1.3 Maintenance of Newly Improved Creeks

Completed 28.5 acres of instream vegetation management on Newly Improved Creeks to reduce flood risk on 1.2 miles of streams throughout the county using an integrated combination of mechanical, hand labor and herbicide methods.

Progress on KPI #2:

E1.4 Vegetation Management for Access

- Completed 2,948 acres of upland vegetation management to maintain access and provide fire protection using an integrated combination of mechanical, grazing, hand labor and herbicide methods. Of this total acreage, 15% of the completed work was funded by Safe, Clean Water for a total of 442 acres towards the 15-year goal of 6,120 acres. (Graph E1.3)
- During the first eight (8) years of the Safe, Clean Water Program, Valley Water managed a cumulative total of 3,591 acres of vegetation, compared to the 8-year target of 3,264 acres.

Financial Information

E1.1 Vegetation Control for Capacity

In FY21, 85% of the annual project budget was expended.

The under-expenditure was because nesting bird and endangered species issues limited the footprint of instream removal that was planned on Guadalupe River from Tasman Drive to Highway 880.

Financial Summary ($ Thousands) E1.1. Vegetation Control for Capacity								
Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$2,529	$0	$2,529	$2,157	$0	$2,157	85%	$24,571	49%

E1.2 Sediment Removal for Capacity

In FY21, 107% of the annual project budget was expended.

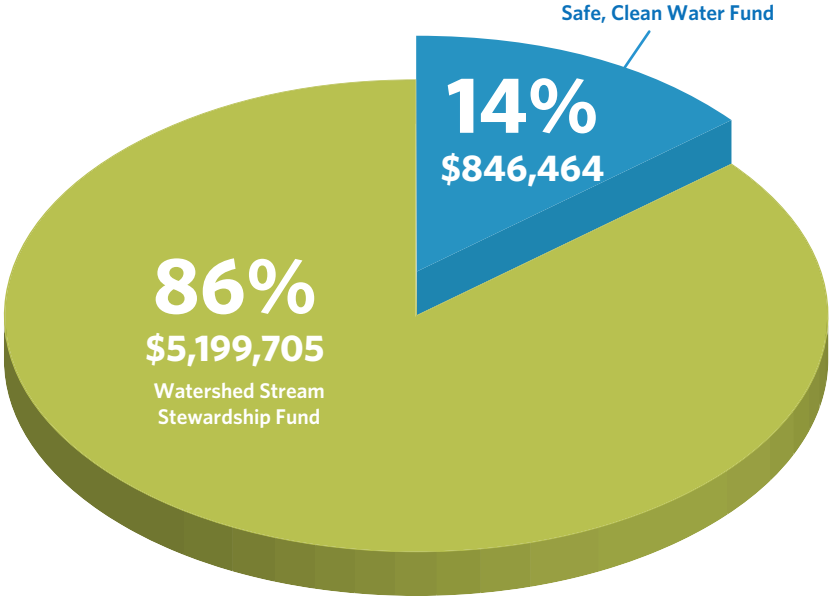
The over-expenditure was because much of the sediment exceeded the criteria for reuse and delivery to Pond A8. The sediment was instead delivered to landfills, thereby incurring additional disposal costs.

Financial Summary ($ Thousands) E1.2. Sediment Removal for Capacity								
Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$846	$0	$846	$908	$0	$908	107%	$9,848	48%

Figure E1.2.1

E1.2 Sediment Removal for Capacity

Total FY21 Project Budget: $6,046,169



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure E1.2.1 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

E1.3 Maintenance of Newly Improved Creeks

In FY21, 260% of the annual project budget was expended.

The over-expenditure was because unplanned instream vegetation management was necessary on a newly improved creek immediately following transition from capital to operations and maintenance.

Financial Summary ($ Thousands) E1.3. Maintenance of Newly Improved Creeks								
Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$65	$0	$65	$171	$0	$171	260%	$19,051	2%

E1.4 Vegetation Management for Access

In FY21, 112% of the annual project budget was expended.

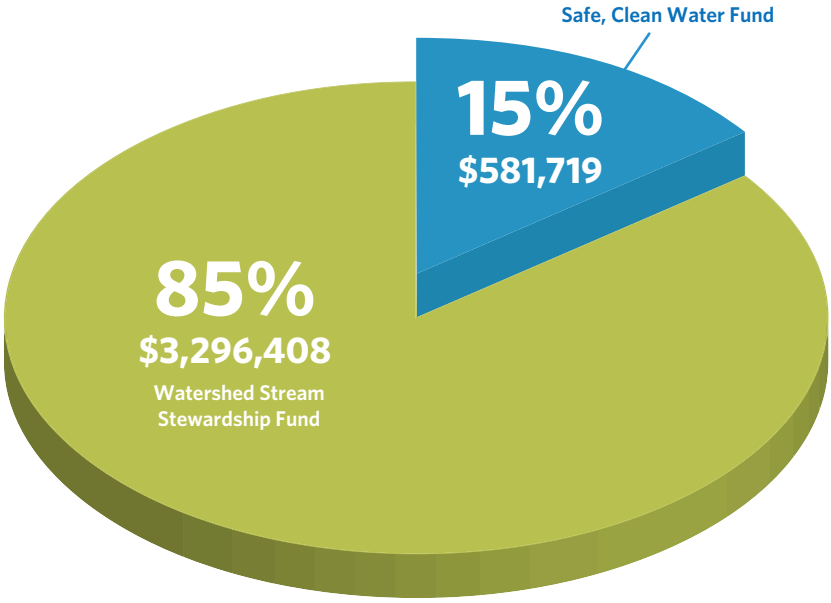
The over-expenditure was because late season rains invigorated weed growth and certain creek reaches required multiple weed abatement treatments.

Financial Summary ($ Thousands) E1.4. Vegetation Management for Access								
Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$582	$0	$582	$652	(0)	$652	112%	$6,156	61%

Figure E1.4.1

E1.4 Vegetation Management for Access

Total FY21 Project Budget: $3,878,127



Valley Water funds this project with more than the Safe, Clean Water Program fund (Fund 26). Figure E1.4.1 shows the project's total adjusted annual budget inclusive of all Valley Water funding sources.

Opportunities and Challenges

Coordination with Project D8: South Bay Salt Ponds Restoration Partnership

To the extent possible, Valley Water coordinates its sediment removal activities, funded in part by Sub-Project E1.2, with Project D8: South Bay Salt Ponds Restoration Partnership. More specifically, removed sediment that meets specific re-use criteria is delivered to the U.S. Fish and Wildlife Service (USFWS)-owned Pond A8 to provide suitable substrate on which marsh vegetation can grow. In FY21, a limited quantity of sediment was placed at Pond A8, as the majority of sediment did not meet specific re-use criteria and was therefore delivered to appropriate landfills.

BEFORE: Sunnyvale East Channel before sediment removal.

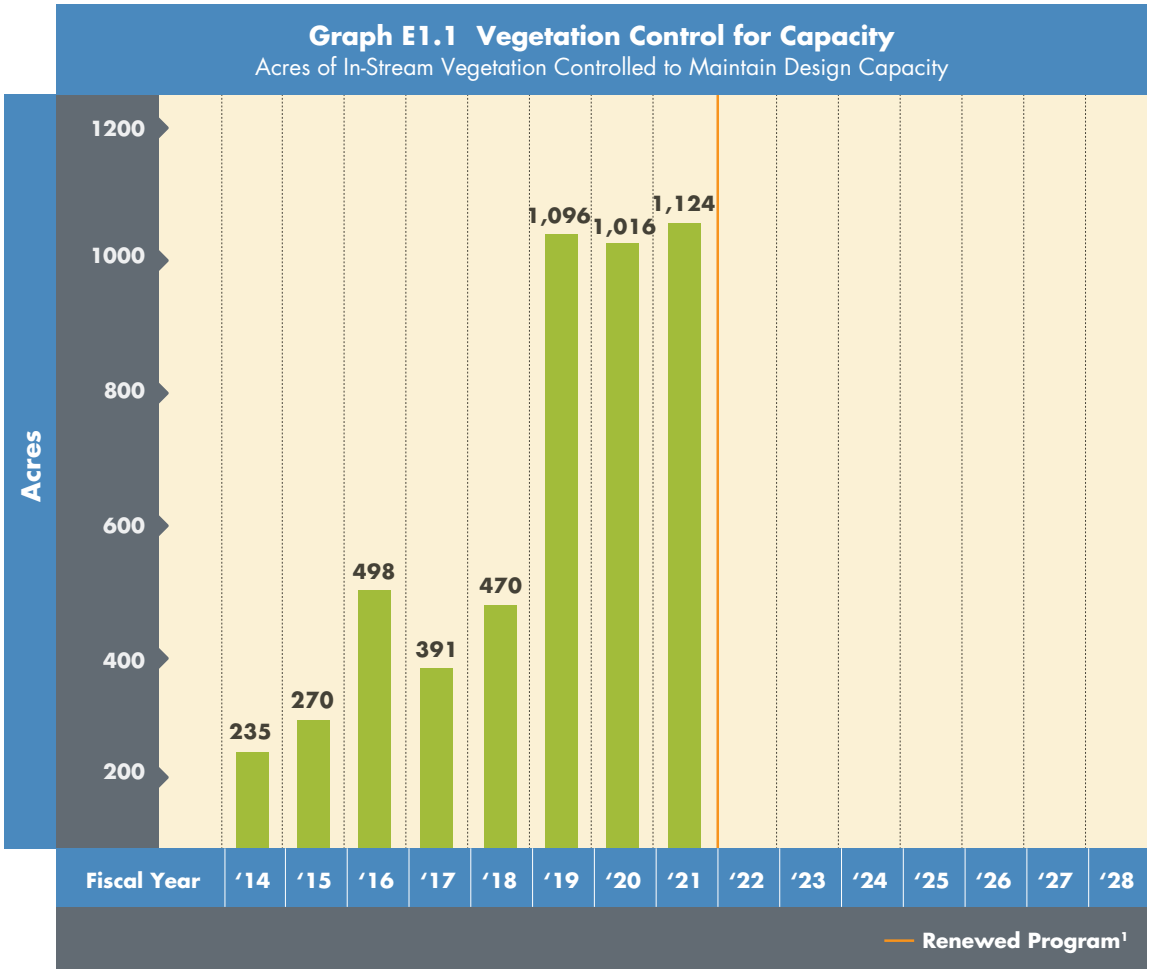
AFTER: Sunnyvale East Channel after sediment removal.

Restoring Flow Conveyance Capacity

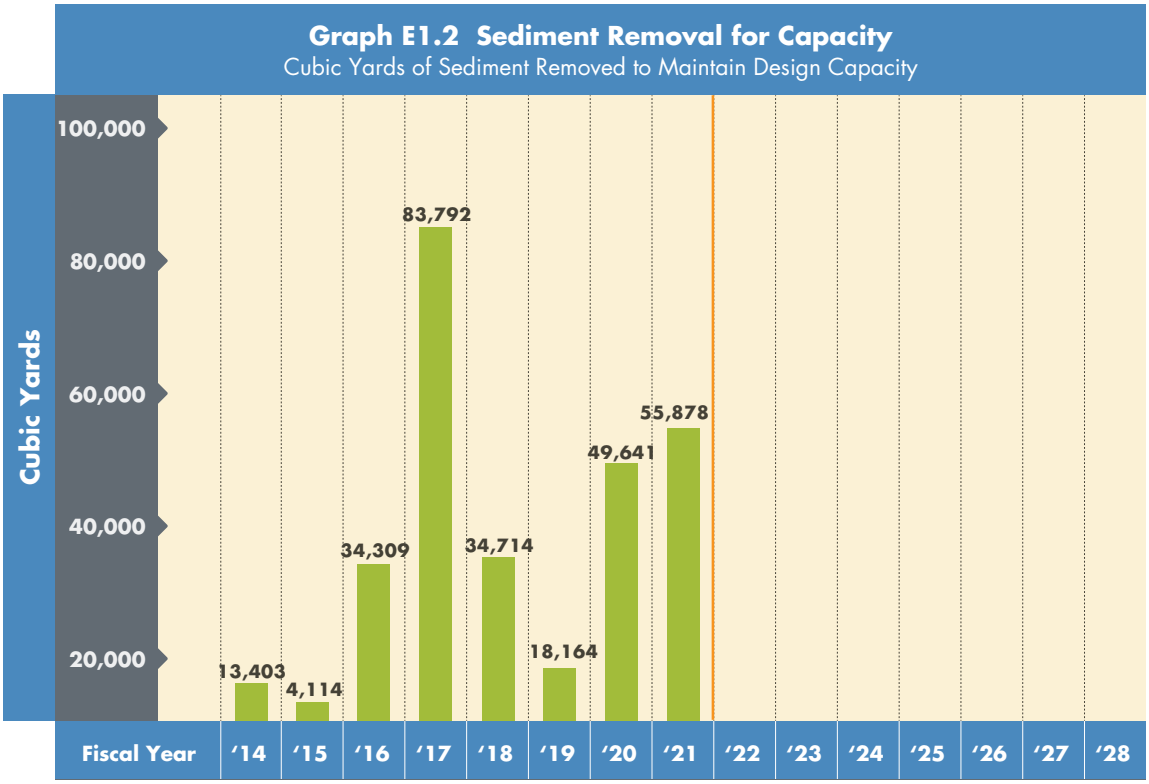
Sediment removal activities were performed at 12 sites along 11 creeks during the FY21 summer Stream Maintenance Program (SMP) season (generally, June 15 through October 15, 2020). Approximately 55,878 cubic yards of sediment were removed to restore flood conveyance capacity. Sediment removal helped keep these reaches of creek flowing adequately during the following winter season to minimize potential for flooding.

Regulatory Agencies' Permit Approvals

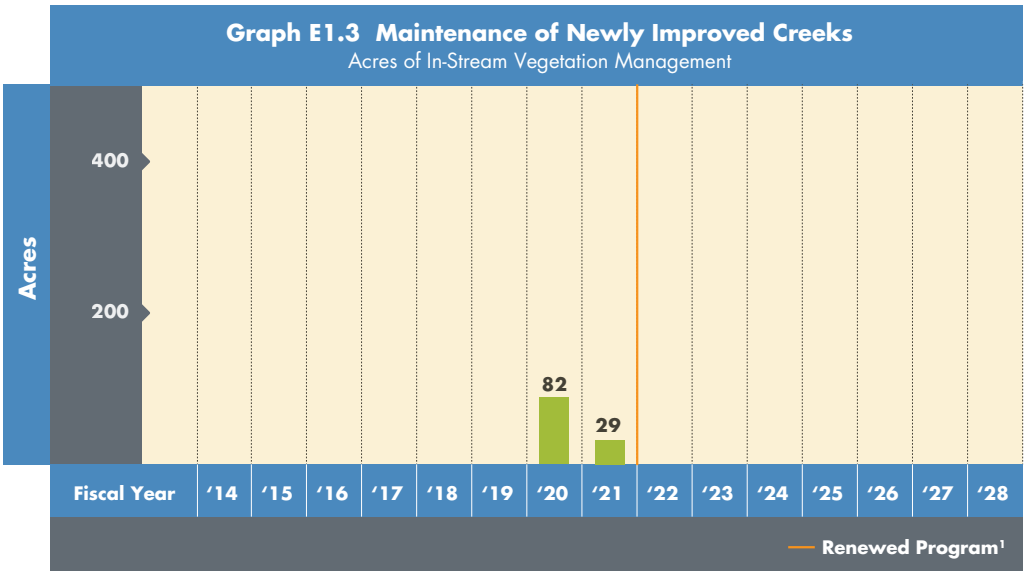
Obtaining regulatory agencies' permit approvals continues to be a challenge for Valley Water, affecting both the ability and cost to perform routine stream maintenance work. Valley Water continues to coordinate with regulatory agencies on mutually acceptable mitigation to offset impacts associated with recurrent sediment removal, vegetation management and other stream maintenance activities.



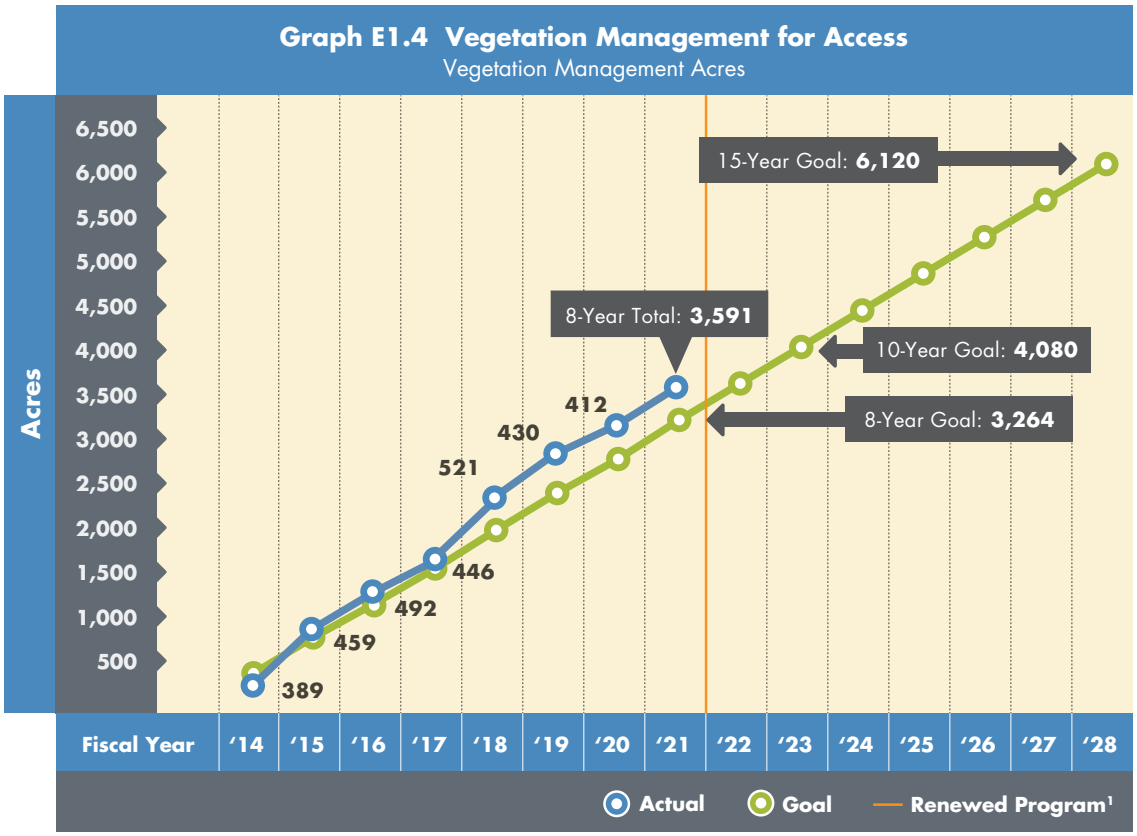
[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.



[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project E2

Emergency Response Planning

This project allows Valley Water to work with local municipalities to clearly identify roles and responsibilities for floodplain management and flood emergency management and increase awareness of Valley Water's flood response procedures. The project supports countywide emergency response and preparedness activities, develops communication procedures and disseminates web-based flood forecasting information developed under Project C2, Emergency Response Upgrades. Collaborators also develop formal, site-specific flood response procedures or action plans (flood-fighting strategies), and coordinate outreach throughout the county so that the public receives uniform flood warning messages.

This project is comprised of 2 sub-projects that support Valley Water's ongoing emergency response planning. Refer to Appendix B in the 5-Year Implementation Plan for project descriptions. These sub-projects are:

E2.1 Coordination with Local Municipalities on Flood Communication

E2.2 Flood-Fighting Action Plans

Benefits

- Reduces flood damage
- Provides effective coordinated response to storm-related emergencies
- Improves community awareness about flood risks

Key Performance Indicators (15-year Program)

1. Coordinate with agencies to incorporate Valley Water-endorsed flood emergency procedures into their Emergency Operations Center plans.
2. Complete 5 flood-fighting action plans (1 per major watershed).

Geographic Area of Benefit: Countywide

Valley Water and City of San José testing JEAP at Ross Creek.

ON TARGET

Project E2 FY21 Highlights

- Continued engagement with the emergency management community by attending monthly meetings and hosting the annual Winter Preparedness workshop with attendees from various cities and the county.
- Tested the West Little Llagas and Uvas Creek emergency response procedures in collaboration with South County stakeholders.
- Completed annual collaboration with the City of San José to update the Joint Emergency Action Plan.
- Completed the San Tomas Aquino Creek flood response plan.
- Began development of the Lower Peninsula Emergency Action Plan.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

E2.1 Coordination with Local Municipalities on Flood Communication

Valley Water continues to work with local municipalities to plan and exercise response plans to best communicate and coordinate during an emergency. In addition, further collaboration with municipalities takes place when updates to current plans are accomplished (e.g. Joint Emergency Action Plan City of San José accomplished annually). The highlights of FY21 efforts follow:

- On April 15, 2021, Valley Water tested its West Little Llagas and Uvas Creek emergency response procedures in collaboration with South County stakeholders. The virtual exercise, due to COVID-19, was attended by representatives from Gilroy, Santa Clara County, Morgan Hill and Cal-Fire as well as a large cross-section of Valley Water staff with EOC Responder responsibilities. The brief hotwash at the end of the exercise yielded invaluable feedback for Valley Water staff to incorporate into internal plans and processes.
- Valley Water attended (virtually) the February, 2021 San Francisquito Creek Managers meeting. The meeting touched on the topics of winter preparedness and Valley Water's emergency action response processes. This effort will continue periodically to ensure communication of Valley Water's flood planning and response practices to all the Joint Powers Authority agencies.
- In February 2021, Valley Water completed its annual collaboration with the City of San José to update the Joint Emergency Action Plan (JEAP). Valley Water staff from vegetation management, engineering maintenance support, hydraulics/hydrology & geomorphology, emergency management and others collaborated with city staff to complete this project. The key updates to the JEAP included the addition of Lower Silver Creek, Lake Cunningham, an attachment for creek hot-spots (where periodic flooding is common) and the Guadalupe River appendix to address pumping in the lower reaches. The updated plan was signed off by the city general manager and Valley Water's CEO.
- The annual Winter Preparedness Symposium was held in October 2020. Due to the virtual format, the time was truncated to accommodate attendees. However, external agencies like National Weather Service and Santa Clara County and internal Valley Water business units (e.g. Water Supply, Office of Emergency Services) presented to the multiple agencies in virtual attendance. This effort annually kicks-off the winter collaboration between Valley Water and external agencies with an effort to maximize effective

communication and a goal of protecting our communities not only as a matter of organizational mission, but also as an employee commitment to public service that protects all our communities within Valley Water's jurisdiction.

Progress on KPI #2:

E2.2 Flood-Fighting Action Plans

In FY21, Valley Water worked on the following action plans:

- Completed the San Tomas Aquino Creek flood response plan, which was incorporated as an appendix into the West Valley Watershed Emergency Action Plan (Plan). The Plan was developed simultaneously with the creek response procedure thus providing a systematic structure for all response plans within the West Valley Watershed. External stakeholder input was incorporated as appropriate to ensure the plans and procedures are better aligned with respective jurisdictions. The development process included two cycles of stakeholder reviews with final executive approval and completion in December 2020.
- Valley Water began the initial preparation of the Lower Peninsula Emergency Action Plan in anticipation of the flood response procedures for Permanente Creek and the Palo Alto Flood Basin to be developed next fiscal year.

Financial Information

In FY21, 59% of the annual project budget was expended.

The under-expenditure was largely due to the 'virtualization' of coordination and exercise activities during the pandemic. An example, planning for the tabletop exercise and deployment of the actual exercise with the cities of Morgan Hill and Gilroy where both were held via Zoom (virtually) given the COVID-19 pandemic.

Financial Summary ($ Thousands)
E2. Emergency Response Planning

Fiscal Year 2020-2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$236	$0	$236	$62	$78	$140	59%	$3,891	30%

Opportunities and Challenges

Coordination with Project C2: Emergency Response Upgrades

When applicable, the flood forecasting products and data collected under Project C2: Emergency Response Upgrades are being incorporated into Project E2: Emergency Response Planning documents to help inform decision-makers. For example, technical mapping and flood-warning baselines produced under Project C2 were used while developing the Guadalupe River flood-fighting action plan and in updating the action plan for San Francisquito Creek, which was developed in FY17. Project C2 focuses on developing flood-warning system infrastructure to assist flood responders by providing forecasted rainfall and streamflow and potential flooding information. Project E2 focuses on pre-event planning and collaboration with other agencies to develop flood response procedures that clarify roles and responsibilities before a flood event arises.

Community Rating System Scores

Project E2 offers an opportunity to meet certain National Flood Insurance Program's (NFIP) Community Rating System (CRS) criteria and potentially increase CRS scores for participating cities in the County. NFIP, administered by the Federal Emergency Management Agency (FEMA), offers flood insurance to all properties in communities that comply with minimum standards for floodplain management. CRS encourages and incentivizes communities to exceed the minimum NFIP requirements by offering discounts on flood insurance premiums. CRS credit points are earned for meeting the following three goals:

1. Reduce flood damage to insurable property;
2. Strengthen and support the insurance aspects of the NFIP; and
3. Encourage a comprehensive approach to floodplain management.

In August 2019, FEMA conducted a review of Valley Water's Community Rating System (CRS) program as part of its 5-year verification cycle visit. As part of the verification cycle visit, Valley Water included the EAPs to increase CRS points. In August 2020, Valley Water receive the results of the review. Although Valley Water increased the rating score to the next CRS class, as a non-regulatory agency, it did not receive any CRS credits for the EAP.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project E3

Flood Risk Reduction Studies

This project develops engineering studies to understand the actual flood risk in high priority flood-prone areas and develops options for managing the flood risks.

Studies will focus on the following reaches:

- Alamitos Creek upstream of Almaden Lake in San José
- Rock Springs neighborhood along Coyote Creek in San José
- Calera Creek near Milpitas High School to Interstate 680 in Milpitas
- Tributaries to Lower Silver Creek (Ruby, Norwood, Quimby and Fowler creeks) in San José
- Ross Creek in San José, from Guadalupe River to Blossom Hill Road
- Adobe and Barron Creeks in Palo Alto, between Highway 101 and Middlefield Rd.

High-water marker on Alamitos Creek.

ON TARGET

Project E3 FY21 Highlights

- Completed Ross Creek engineering feasibility study.
- Made substantial progress on a study to identify hydraulically feasible alternatives to provide flood protection on South Babb Creek.

The engineering studies include hydrology, hydraulics, geotechnical, and remapping work of the floodplain areas to provide a more accurate reflection of the floodplain. If the outcome of the engineering studies results in updates to the parcels that fall within the effective Federal Emergency Management Agency (FEMA) floodplain, the updated maps and parcel count summaries will be submitted to the impacted city/cities. It is each impacted city's responsibility to determine how best to inform its community and whether to submit the updated maps to FEMA. If the impacted city decides to hold public meetings, Valley Water will provide support materials and offer technical support to address questions from the community. To revise the effective FEMA floodplain, the impacted city would be required to submit the updated maps through FEMA's formal Letter of Map Revision (LOMR) process. Valley Water's role in the LOMR process is to provide technical support and background on the analysis performed during the engineering study. If the impacted city chooses not to submit the updated maps to FEMA, the maps can still be useful to the city in planning efforts and for residents in determining whether or not to purchase flood insurance. Valley Water's updated maps will be made available to the public on ***valleywater.org***.

Flooding History and Project Background

In 1997, the Rock Springs neighborhood suffered severe flood damages to approximately 25 low-income apartment buildings. A subsequent study investigated the flooding problem and offered possible solutions.

Alamitos and Calera Creeks were modified with levees and floodwalls about 30 years ago, but their designs do not meet current FEMA guidelines which were published after the projects were built. Both the Alamitos and Calera neighborhoods are mapped as regulatory floodplains. In 2012, FEMA released new draft technical guidance for mapping floodplains behind levees; these new guidelines may significantly reduce the size of the regulatory floodplains for Alamitos and Calera Creeks, but a study is needed to qualify for updated regulatory mapping.

Every winter, thousands of households, schools and businesses in San José are susceptible to flood damage in the Lower Silver Creek watershed. While Valley Water is improving the flood carrying capacity of Lower Silver Creek itself, the smaller tributaries continue to pose a flood risk. Project E3 would map and quantify these flood risks and identify possible solutions that may also provide environmental or recreational benefits.

Benefits

- Provides more accurate mapping of areas at risk of flooding
- May add or remove parcels from the FEMA regulatory floodplain, based on updated mapping standards
- Information can be integrated into flood warning program to provide advance, real-time warnings of impending flood events
- Provides technical basis for developing future flood protection plans, and for potential funding partnerships

Key Performance Indicators (15-year Program)

1. Complete engineering studies on 7 creek reaches to address 1% flood risk.
2. Update floodplain maps on a minimum of 2 creek reaches in accordance with new FEMA standards.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

In FY21, work included completion of the Ross Creek engineering feasibility study and substantial progress on a study to identify hydraulically feasible alternatives to provide flood protection on South Babb Creek.

The Ross Creek engineering feasibility study was completed and has been posted to the E3 webpage. In FY21, work on the study included:

1. Finalizing the unsteady-state and 1-D HEC-RAS models, which represent various feasible alternative conditions, including various combinations of proposed detention ponds, floodwalls and bridge modifications; and

2. Finalizing the draft feasible alternatives report.

This alternatives analysis will result in a potential flood protection design for the reach. The project explores two different flood protection targets- 25- year (4%) and 100- year (1%) flood protection.

The South Babb study included analyses to explore both flood mitigation and 100-year flood protection projects on South Babb Creek. Work in FY21 included refining the FY20 hydraulic modeling to identify alternatives for flood mitigation and 100-year flood protection and estimating costs. A feasibility analysis of each identified flooding solution, which is also underway, will identify other issues, such as constructability.

So far, Valley Water has completed engineering studies on five (5) reaches of creeks. These are on Ross Creek (Guadalupe River to Blossom Hill Road in San José), Coyote Creek (Bay to Anderson Dam, including Rock Springs Neighborhood); Adobe and Barron Creeks tidal flood protection (Highway 101 to Middlefield Road in Palo Alto); and Alamitos Creek (upstream of Almaden Lake in San José). Another engineering study on Lower Silver Tributaries (focused mainly on South Babb) is underway and expected to be completed in FY22. Valley Water plans to complete the remaining study on Calera Creek under the renewed Safe, Clean Water Program.

Progress on KPI #2: (Completed)

- In FY21, the model was further refined to represent proposed alternative solutions for deeper flooding (> 1 ft) observed for the 100-year floodplain near South Babb Creek.
- Remapping of Alamitos Creek per the updated FEMA methodology was completed in FY19. Valley Water reached out to the City of San José in FY19 to discuss the remapped areas. So far, the city is using this information to better understand flooding risks for their area.
- An ICM model (urban hydrology) for the Lower Silver and Thompson Creeks watershed was developed in 2016 for a previous FEMA study. That model represents the storm drains with diameters greater than 24" explicitly so that storm drain routing and storage is accounted for directly. The model has been further developed to understand flooding risks along the Lower Silver and Thompson Creek tributaries. A few smaller storm-drain pipes were added to refine the floodplain in key areas.

Financial Information

In FY21, 98% of the annual project budget was expended.

Financial Summary ($ Thousands) E3. Flood Risk Reduction Studies								
Fiscal Year 2020–2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$1,184	$0	$1,184	$1,116	$38	$1,154	98%	$9,374	68%

Opportunities and Challenges

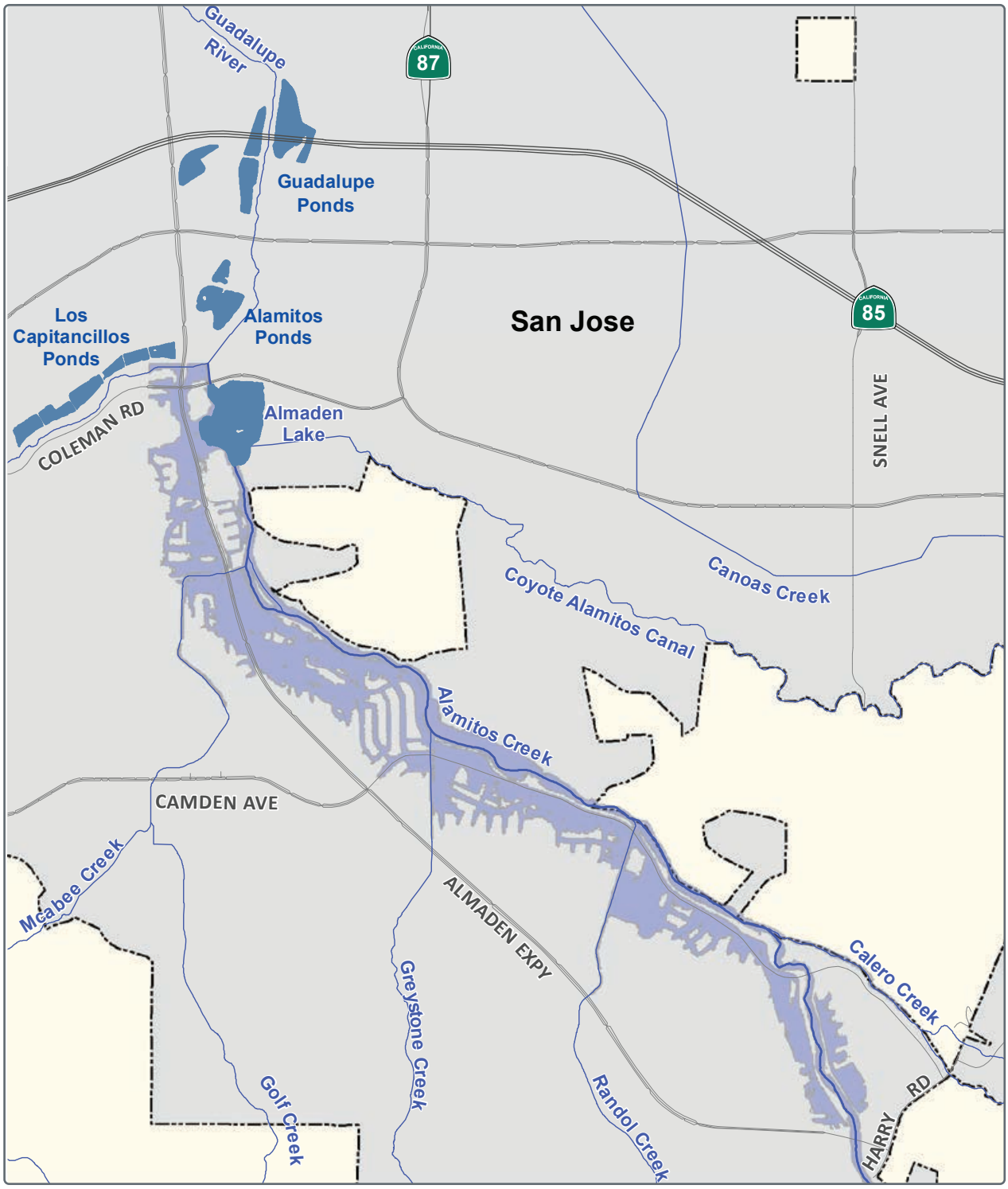
Nexus to Other Valley Water Projects

One of the first tasks of an engineering study is to evaluate and, if needed, update the existing floodplain or flood risk areas. These refined floodplain risks and/or maps are incorporated into our emergency action plans, which are used by both Valley Water and the cities during flood events. The maps are shared with the cities directly as additional information to use when regulating development within the floodplain.

Updated flooding risk is also used to help prioritize projects, noting that flooding risk is one factor of many. If the engineering study is picked up as a capital project, the data collected from the engineering study forms the starting point for that project- providing key background information, updated hydraulic models, and some feasible alternatives for further development. For example, the Coyote Creek study completed under this project was utilized to develop the short-term flood relief measures that Valley Water constructed under the Coyote Creek Flood Protection Project.

Figure 1 below shows a simplified version of the Coyote Creek (Rock Springs neighborhood) study map.

Figure 2 below shows a simplified version of the Alamitos Creek study map.



Alamitos Creek

Alamitos Creek Study - 1% Flood Risk Zone

Santa Clara County Cities

Santa Clara County

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project E4

Upper Penitencia Creek Flood Protection Coyote Creek to Dorel Drive – San José

Preferred project: A federal-state-local partnership

This project continues a partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct improvements along 4.2 miles of Upper Penitencia Creek from the confluence with Coyote Creek to Dorel Drive. Part of the project will protect the area around the Bay Area Rapid Transit's Berryessa station near King Road, which would otherwise be subject to flooding.

The natural creek channel will be preserved while adjacent existing open space and parkland will remain as recreational areas, only rarely taking the role as a temporary floodplain so that floodwaters do not enter surrounding neighborhoods and commercial areas. Proposed construction measures may include modified floodplains, levees, flood walls, bypass channels, and fish passage improvements. Existing Valley Water water supply facilities may also be modified to protect habitat and improve water supply reliability.

The local funding from Safe, Clean Water Program allows Valley Water to move ahead with the planning, design and construction of the project.

Upper Penitencia Creek along Commodore Park.

ON TARGET

Project E4 FY21 Highlights

- Continued work on the planning study, focusing on a multi-purpose project.
- Obtained a consultant to help conduct a Geomorphology Study.

Flooding History and Project Background

Upper Penitencia is a major tributary of Coyote Creek, flowing westerly from Alum Rock Park through the residential neighborhoods of Berryessa and Alum Rock in San José. More than 5,000 homes, schools and businesses are located in this floodplain, including many high-tech and commercial industries supporting the greater Silicon Valley.

With the capacity to carry less than a 10-year event, Upper Penitencia Creek has spilled its banks at least 7 times since Valley Water began preparing flood reports in 1967. Damaging flood events occurred in 1978, 1980, 1982, 1983, 1986, 1995, and 1998, impacting many homes, businesses and surface streets.

Potential damages from a 1% (or 100-year) flood event are estimated at $455 million (in 2004 dollars, according to a USACE economic analysis), with average annual damages estimated at $30.5 million for the full reach from the Coyote Creek confluence to Dorel Drive.

The preferred project would build on a 1981 tri-party agreement between Valley Water, the City of San José, and Santa Clara County to preserve open land and provide flood protection along the Upper Penitencia Creek corridor. As a result of the agreement, 78 acres have been permanently preserved as Penitencia Creek

County Park and Penitencia Creek Trail. A 4-mile, intermittent trail follows Upper Penitencia Creek from 700-acre Alum Rock Regional Park to its confluence with Coyote Creek. In addition to much-needed flood protection, this project will help provide the opportunity for the City of San José and Santa Clara County to complete the long-planned trail and linear park.

Benefits

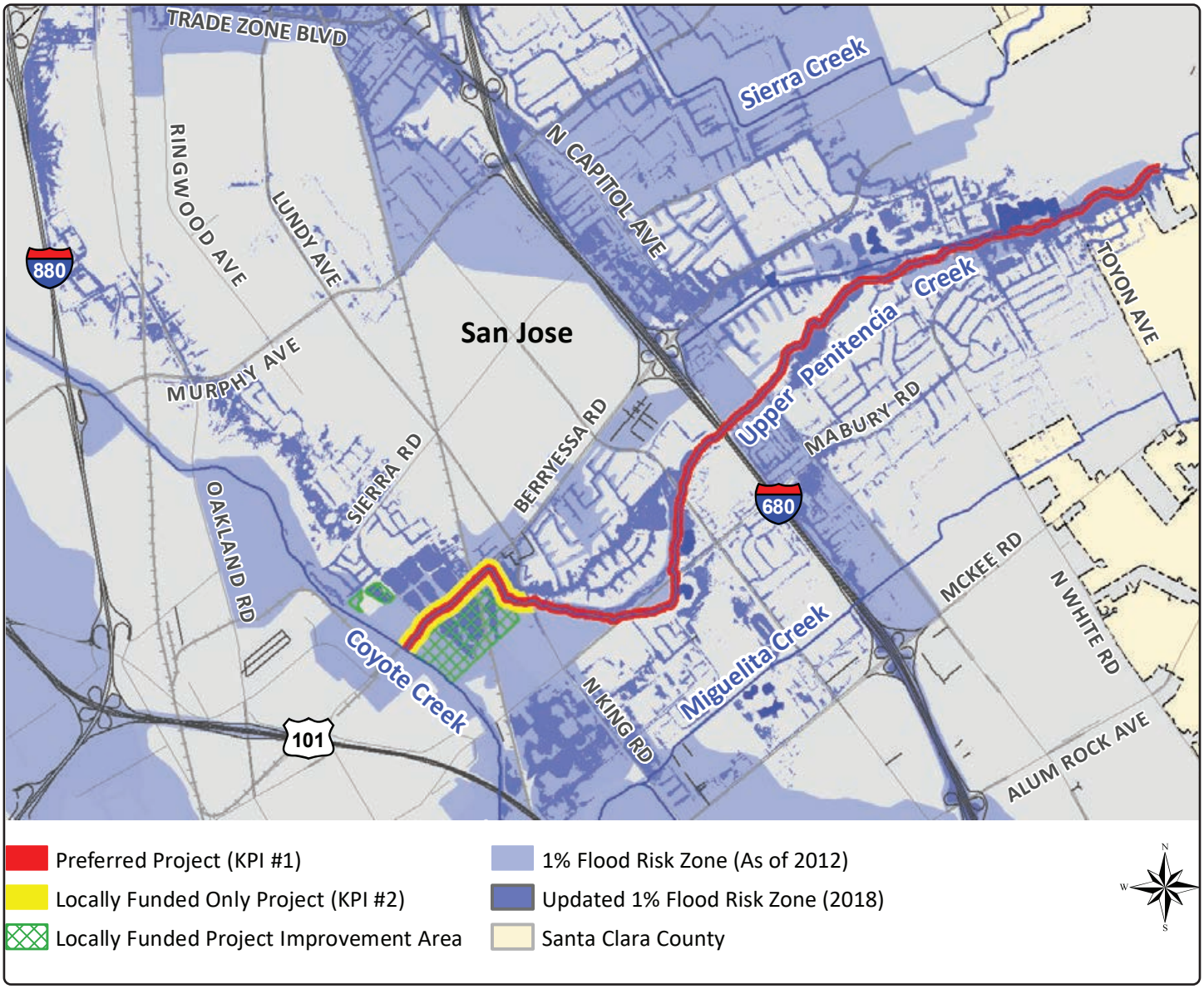
- Preferred project provides 1% flood protection to approximately 5,000 homes, schools and businesses. Locally funded-only project provides 1% flood protection to the proposed rapid transit station and areas downstream from King Road
- Reduces sedimentation and maintenance requirements
- Improves water quality in Coyote Creek
- Provides opportunities for recreation improvements consistent with the City of San José and Santa Clara County Park master plans

Key Performance Indicators (15-year Program)

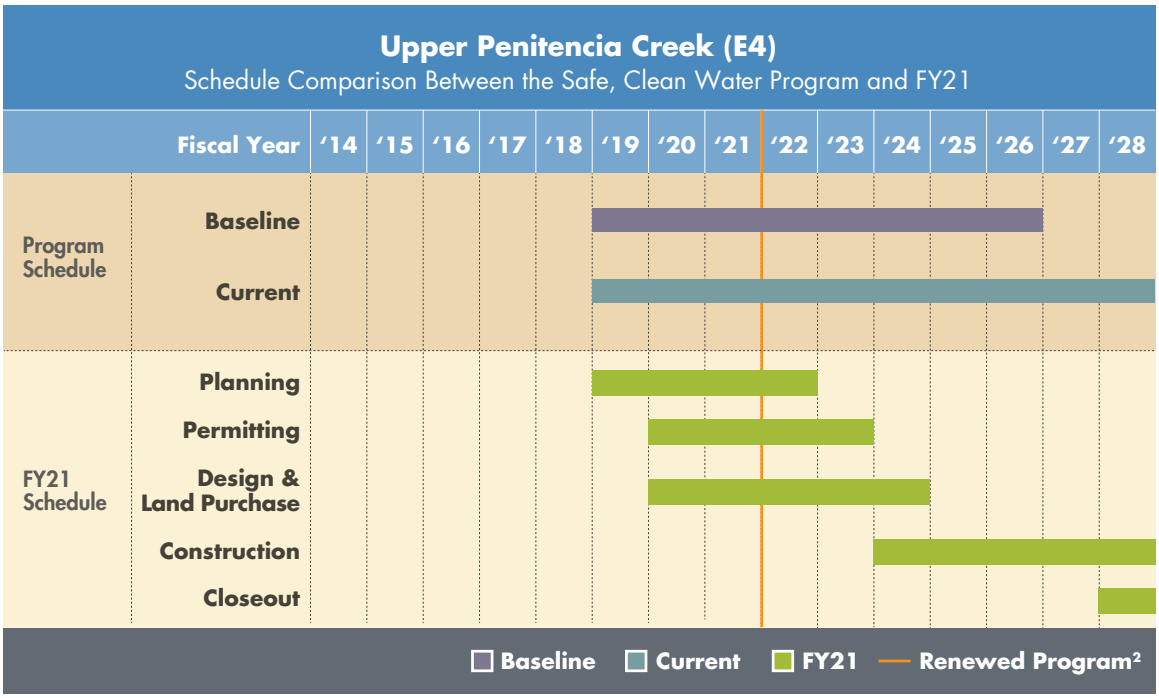
1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% flood protection to 5,000 homes, businesses and public buildings.
2. With local funding only: Acquire all necessary rights-of-way and construct a 1% flood protection project from Coyote Creek confluence to King Road.

Geographic Area of Benefit: San José and Milpitas

Project Location



Schedule



[1] Board approved a schedule adjustment through the change control process in FY20.
[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	ADJUSTED
FY 16	ADJUSTED
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ADJUSTED

Status for FY21: ON TARGET

Progress on KPI #1 and #2 (combined):

In FY21, Valley Water continued working on and finalizing the planning study, focusing on a multi-purpose project that would provide long-term benefits for flood protection, fish and wildlife, riparian vegetation, water supply and recreation. This followed the December 2019 Board direction to staff to use local funding to proceed with the design and construction of the lower reaches of the project, from Coyote Creek up to Capitol Avenue. These lower reaches include Phase I of the project, which addresses the local-funding only KPI #2 of Coyote Creek confluence to King

Road, and Phase II of the project of up to Capital Avenue, which is part of the preferred project KPI #1. The Board decision maximizes the flood protection provided to the community with local dollars, as these reaches would protect 1,250 parcels

In June 2020, Valley Water finalized the Feasible Alternatives and Staff Recommended Project Report, and also completed the draft Planning Study Report (PSR) late in the year. In FY21, Valley Water hired the consultant ESA to help conduct a Geomorphology Study to develop geomorphic and ecological restoration/enhancement details of the preferred project. The study will be completed early in FY22 and will be the last step needed to formulate the recommended project for the planning study report as the project moves into the design phase. Conducting the geomorphology study delayed the completion of the PSR by nearly a year, but the result will be a more reliable recommended project. The COVID-19 pandemic also caused the project lead to work a reduced schedule in FY21. As a result, the completion of the planning phase was delayed until FY22. However, there is no change in the overall project completion schedule and the project is still expected to be completed in FY28.

Financial Information

Financial Summary ($ Thousands)
E4. Upper Penitencia Creek

Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Bduget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$1,382	$3,546	$2,516	$7,444	$872	$0	$872	12%	$24,999	8%

In FY21, 12% of the annual project budget was expended.

The under-spending was due to the geomorphology study added to the planning phase as well as reduced available staff resulting from impacts of the COVID-19 pandemic and staff promotion to other units. The project did not move to the design phase this fiscal year as previously projected, and, therefore, the significant design and CEQA/permitting budget was not utilized in FY21. A consultant for the CEQA process is expected to be obtained in FY22.

Opportunities and Challenges

Water Supply

There are a number of water supply facilities along the project reaches, including groundwater percolation ponds. Project alternatives should not reduce recharge operations in the watershed and should look for the opportunity to preserve water supply functions.

Ecosystem Restoration

The natural corridor at Upper Penitencia Creek is considered to be among the best remaining habitat areas in the Santa Clara Valley between Coyote Creek and the Diablo Range. Habitat in Upper Penitencia Creek could support several special-status species, including steelhead trout, California red-legged frog, California tiger salamander,

and Western pond turtle. The upstream portion of the project area contains valuable and relatively undisturbed native California sycamore alluvial woodland.

Recreation

There are several parks and open spaces along the creek, as well as the Penitencia Creek Trail. These recreational features are well-used by the community, and there are opportunities for this project to work jointly with its partners to improve these resources. A significant benefit the project will provide is to build and extend the Penitencia Creek Trail down to the Coyote Creek confluence and connect it to the Coyote Creek Trail system.

Confidence Levels

Schedule: Moderate confidence

Completion of the final Planning Study Report was delayed by nearly a year and the project will transition into design in FY22. The majority of the preferred project is on public land and the project team has been working closely with the public entities to get the project built on schedule. A portion of the preferred project is on private land and Valley Water has been working closely with the owner to get a dedication for the project. There is the potential of finding cultural artifacts along the project site during construction, which may result in schedule delays.

Funding: Moderate confidence

In FY14-18, Valley Water aggressively pursued federal funding for the project. The USACE scope of the project was limited to a single-purpose flood risk reduction project, while the community and environmental regulatory agencies advocated for a multi-purpose project. In support of a multi-purpose project, Valley Water decided to move forward with planning, which would also facilitate a local funding-only project aimed at meeting multiple beneficial goals, including water quality and providing opportunities for recreation improvements and habitat restoration.

Permits: High confidence

The resource agencies have been brought in very early in the planning process and will continue to be engaged during planning and design. This will help shape a true watershed project with associated ecosystem restoration measures and facilitate the acquisition of regulatory permits for project construction.

Jurisdictional Complexity: Moderate confidence

The project is entirely within the City of San José. A tri-party agreement between the City of San José, Santa Clara County and Valley Water to jointly use mutual resources along the creek for recreation, flood protection and water supply purposes aligns the local jurisdictions well with the project. Coordination with the City and County has gone well regarding the Coyote Creek to Capitol Avenue reaches. If and when Valley Water moves forward with the upper reaches, Capitol Avenue up to Dorel Drive, Valley Water will have to conduct significant coordination efforts with the City and County to develop plans and land-use agreements for flood detention on public land.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Friendship Bridge on San Francisquito Creek.

ON TARGET

Project E5 FY21 Highlights

S.F. Bay to Highway 101: Completed in FY19

Upstream of Highway 101:

- Continued to work on the 95% design document for channel constrictions upstream of Highway 101.
- The City of Palo Alto Council has certified the Environmental Impact Report and approved the Newell Road Bridge Replacement project.
- Construction of the Pope/Chaucer Street Bridge to begin after construction of the Newell Road Bridge and channel improvements.
- Pope-Chaucer Street Bridge is currently at 80% design and going through the Palo Alto Architectural Review Board process.

Project E5

San Francisquito Creek Flood Protection
San Francisco Bay to Middlefield Road – Palo Alto

The project is sponsored by the San Francisquito Creek Joint Powers Authority (SFCJPA), of which Valley Water is a member agency, in partnership with the U.S. Army Corps of Engineers (USACE). The project builds on the planning and design tasks initiated as part of the Clean, Safe Creeks plan.

Preferred project: A federal-state-local partnership

This project will complete construction of setback levees and floodwalls from San Francisco Bay to Highway 101 to provide 1% (or 100-year) flood protection and ecosystem benefits. Upstream of Highway 101 the project will provide 1% flood protection, ecosystem protection, and recreational benefits.

The work upstream of Highway 101 will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street, and include; a combination of: modified bridges at University Avenue and Middlefield Road; upstream detention; under-ground bypass channels; and floodwalls.

Local-state-funding-only project:

The local-state-funding-only project will be the same as the preferred project downstream of Highway 101; but upstream of Highway 101, the project will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street to allow the channel to contain flood waters equal to the channel's capacity of 7,000 cubic feet per second, approximately a 30-year event. Allowing this level of water to flow through the channel will protect approximately 3,000 parcels in Palo Alto from a flood event close to the February 1998 flood, the largest on record. Currently the channel can only convey a 15-year flood event.

The Newell Road bridge replacement, unlike the rest of the upstream project, is sponsored by the City of Palo Alto, who has applied for funding through Caltrans' Highway Bridge Program. The project has been programmed by Caltrans to fund approximately 89% of the total cost for replacing the Newell Road bridge. The local match funds, approximately 11% of the total cost, will be funded through Valley Water's Safe, Clean Water Program. The City of East Palo Alto and the SFCJPA continue to provide input on the Newell Road bridge replacement.

If sufficient funding becomes available, a 1% flood protection project upstream of Highway 101, including some combination of: modifications to the University Avenue and Middlefield Road bridges; upstream detention; underground bypass channels; and floodwalls, could be built.

Flooding History and Project Background

San Francisquito Creek is one of the last continuous riparian corridors on the San Francisco Peninsula, and is also home to 1 of the few remaining viable steelhead trout runs. The creek can cause severe flood damage with very little warning and has overflowed 7 times since 1910.

During the February 1998 El Niño event, record flooding caused an estimated $28 million in damages in Palo Alto, East Palo Alto and Menlo Park. More than 1,100 homes were flooded in Palo Alto, and Highway 101 was closed, as were numerous other roadways. The largest flood on record prior to 1998 occurred in December of 1955 when the creek overtopped its banks in several locations, inundating about 1,200 acres of commercial and residential property. Damages were estimated at nearly $2 million in 1956 dollars. Total damages from a 1% flood event are estimated at $300 million in Santa Clara and San Mateo Counties, as calculated by the USACE in 2011.

Benefits

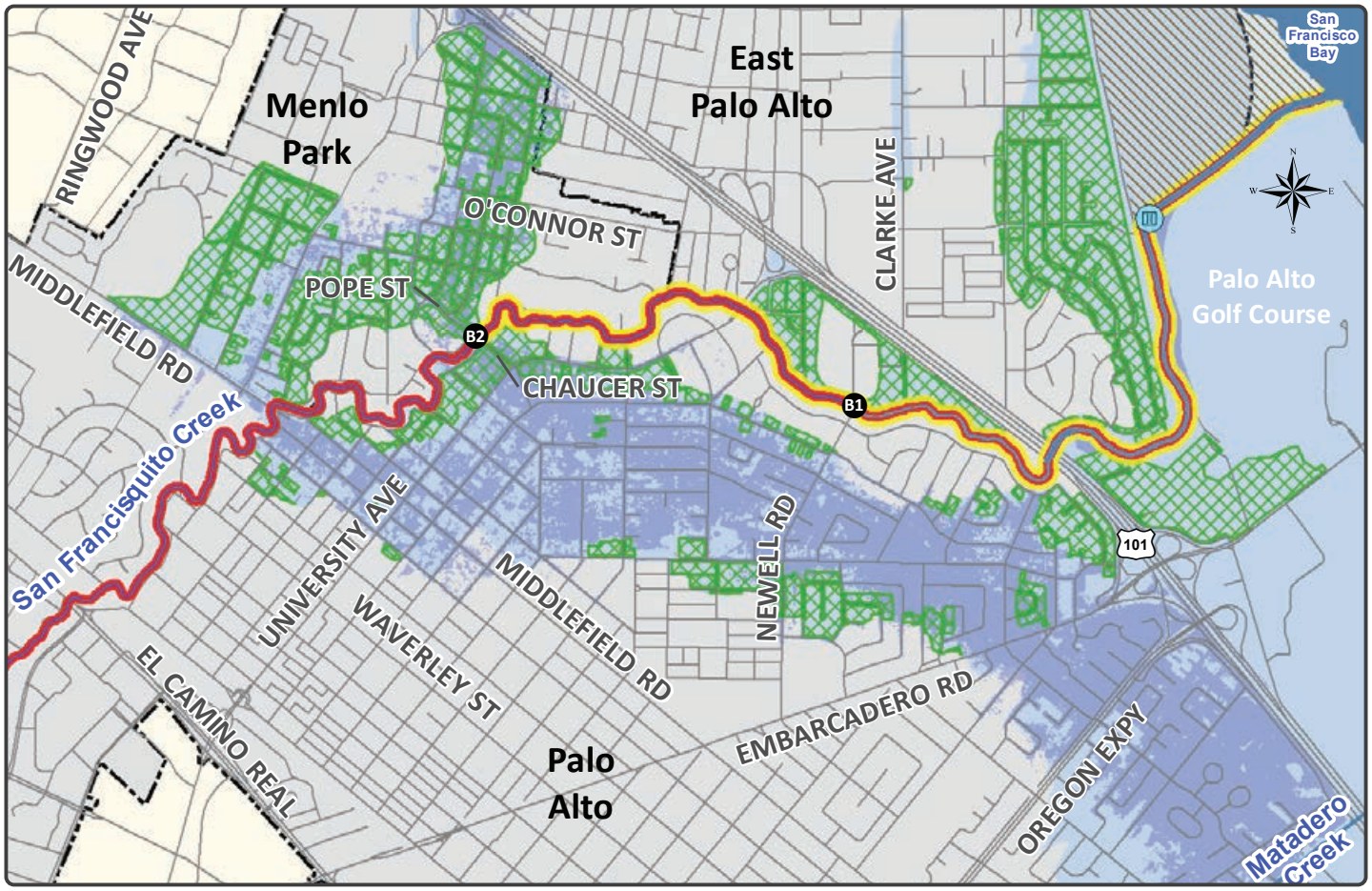
- Provides 1% flood protection for approximately 3,000 homes and businesses in Palo Alto
- Reduces bank erosion and sedimentation-related impacts along San Francisquito Creek
- Provides new or improved habitats for endangered species
- Improves water quality
- Enhances recreational opportunities for the community
- Leverages dollars via cost-shares and grants from the state Department of Water Resources and the California Department of Transportation

Key Performance Indicators (15-year Program)

1. Preferred project with federal, state and local funding: Protect more than 3,000 parcels by providing 1% flood protection.
2. With state and local funding only: Protect approximately 3,000 parcels from flooding (100-year protection downstream of Highway 101, and approximately 30-year protection upstream of Highway 101).

Geographic Area of Benefit: Palo Alto

Project Location



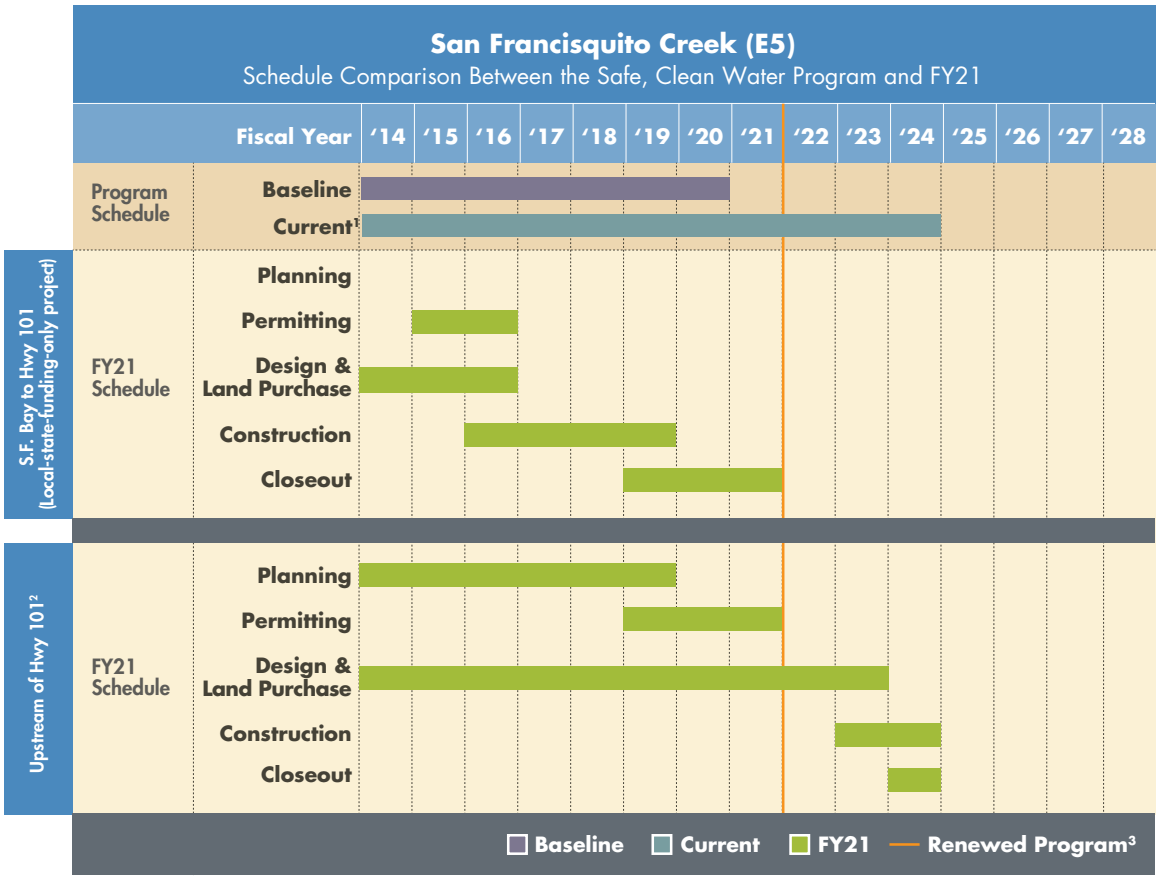
LEGEND

- Preferred Project (KPI #1)
- Local-State Funded Only Project (KPI #2)
- Locally Funded Project Improvement Area
- Faber Tract Marsh
- 1% FEMA Flood Risk Zone
- Updated 1% Flood Risk Zone (2016)
- Cities
- California Counties
- Friendship Bridge

Bridge Modification Projects:

- Newell Rd (Palo Alto)
- Pope/Chaucer St (Valley Water)

Schedule



[1] Board approved a schedule adjustment through the change control process in FY19 & FY20.
[2] Federal SFCJPA has not yet determined if pursuing federal funding for upstream of project.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	*MODIFIED*
FY 15	*ON TARGET*
FY 16	*ON TARGET*
FY 17	*ON TARGET*
FY 18	*ADJUSTED*
FY 19	*ADJUSTED*
FY 20	*ADJUSTED*

Status for FY21: ON TARGET

Progress on KPI #1 and #2 (combined):

S.F. Bay to Highway 101 Project

Local-state-funding only - design and construction of 1% flood protection project

- Construction of flood protection improvements for this reach was completed on May 14, 2019, which included construction of approximately 4,000 feet of floodwall; excavating sediment and degrading the existing levee from East Bayshore Road to Geng Road; degrading approximately 600 feet of levee on the East Palo Alto side of the creek adjacent to the Faber Marsh; and completing approximately 800 feet of the new offset levee on the Palo Alto side of the creek. Installation of mitigation planting was completed in the summer of 2019.

Upstream of Highway 101 Project

Federal, state and local funding - planning and design of 1% flood protection project

- Based upon the impacts to the project's timeline and funding, on June 27, 2019, the SFCJPA Board approved staff's recommendation to pursue options for USACE funding that does not require Congressional authorization through the USACE Continuing Authorities Program Section 205 (CAP 205) process. The SFCJPA and USACE worked to move forward with closing the project under the GI Study and formally initiated the CAP 205 process in early FY20. After the adoption of the SFCJPA FY21/22 Operation Budget, the SFCJPA anticipates entering into a Feasibility Cost Share Agreement (FCSA) with the USACE in the summer of 2021.

Local-state-funding-only - construction of approximately 30-year flood protection project

Channel constrictions

- Continued to work on the 95% design document for channel constrictions upstream of Highway 101. The design continues to be optimized with additional alternatives analysis to address community feedback, including minimizing tree impacts and removals, and construction impacts to adjacent properties.

- The design documents are being coordinated with the SFCJPA and are expected to be completed in the summer of 2022. Construction is expected to begin in the late spring of 2023 and be completed by December 2023 (FY24).

- The Final Environmental Impact Report (EIR) was completed and certified by the SFCJPA board in September 2019.

Newell Road Bridge

- The City of Palo Alto is responsible for planning, permitting, design and construction of the Newell Road Bridge Replacement project. The planning, permitting and design phases are primarily funded by a Caltrans grant. Valley Water is contributing the required local cost-share for the grant. The City of Palo Alto Council certified the Final Environmental Impact Report and approved the proposed project in June 2020. The design is scheduled to be completed by the end of 2022. Construction is anticipated to begin in spring of 2023 and the in-channel

work must be completed by October 2023, with any remaining work outside top-of-bank completed by winter 2023 (FY24).

Pope/Chaucer Street Bridge

- Pope-Chaucer Street Bridge is currently at 80% design and going through the Palo Alto Architectural Review Board (ARB) process. After receiving input from the ARB at its December 17, 2020 study session, the SFCJPA and Valley Water are preparing for the hearing scheduled in July 2021. The design documents are expected to be completed by late 2022. Because the Pope/Chaucer Street Bridge is located further upstream of the Newell Road Bridge and because both bridges cannot be replaced in the same construction season due to negative traffic impacts, construction of the Pope/Chaucer Street Bridge would begin after the construction of the Newell Road Bridge and channel improvements are completed

- Any delays in the construction of the Newell Road Bridge would delay the construction schedule for the Pope/Chaucer Bridge. However, staff is considering the option of advancing the construction of Pope/Chaucer Bridge replacement ahead of the construction of the Newell Road Bridge. Under this option, the flow conveyance capacity would be temporarily constricted to maintain the existing capacity to avoid transference of risk of additional flooding downstream. The temporary flow constrictions at Pope/Chaucer Bridge would be removed once the Newell Road Bridge is replaced. Staff will continue to assess this option in FY22.

Financial Information

In FY21, approximately 36% of the annual project budget was expended.

The underspending was primarily due to design delays caused by the need for additional alternative analysis to address community feedback as well as the ongoing regulatory permit acquisition process.

Currently, the funding shortfall for the upstream of Highway 101 project construction is estimated to be between $5.2 million to $8.2 million, which assumes the award of multiple grants. The SFCJPA and Valley Water, in conjunction with USACE and FEMA, continue to seek federal funding through the CAP 205 process and by expanding the Hazardous Mitigation Grant Program grant. In addition, the SFCJPA and Valley Water are in the process of evaluating the possibility of deferring a project element to a later time, which could save over $6 million.

Financial Summary ($ Thousands)
E5. San Francisquito Creek

Fiscal Year 2020–2021									15-year Program	
Project No. and Name	Adopted Bduget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
					Actual	Encumbrance	Total			
26284001 Planning and Design (Highway 101 to Searsville Dam)	$0	$112	$0	$112	$0	$0	$0	0%	$28,843	16%
26284002 Construction (SF Bay to Highway 101 and Upstream Elements)	$370	$2,299	$0	$2,669	$994	$0	$994	37%	$51,535	93%
Total	**$370**	**$2,411**	**$0**	**$2,781**	**$994**	**$0**	**$994**	**36%**	**$80,378**	**65%**

Opportunities and Challenges

Refined Modeling Shows Higher Flood Protection

As more years of data become available, flood estimates are refined and result in revisions of design flows. With several storm events in recent years and additional stream gauge data becoming available, Valley Water has updated its hydrology that now shows that improving stream channel capacity upstream of Highway 101 to contain 7,200 cubic feet per second (cfs) would protect the community from an approximately 70-year flood event instead of previously estimated 30-year event. To accommodate further inflow downstream of Middlefield Road, Valley Water is using 7,500 cfs as a design flow for the project.

Confidence Levels

Upstream of Highway 101 Project

Schedule: Low confidence

Prior to constructing the local-state-funding-only project, the CAP 205 study must be completed and state and federal regulatory permits must be secured.

Due to the complexities and uncertainties related to securing regulatory permits and funding shortfalls for a multi-jurisdictional project, project completion could be pushed to FY25.

Funding: Moderate confidence

There is a funding shortfall due to increasing construction costs and currently unknown design elements for the local-state-funding-only project. Valley Water's funding contribution has been secured through the renewal of the Safe, Clean Water Program. Additionally, the project is expected to receive between $5.9 million and $14.8 million in grants, while continuing to seek additional grant funding. As the funding shortfall narrows the SFCJPA member agencies plan to enter into a construction funding agreement to close any remaining funding gap. Additionally, the SFCJPA, in conjunction with USACE, continues to seek federal funding, through the CAP 205 process for the 1% flood protection project upstream of Highway 101.

Permits: Moderate confidence

Valley Water does not expect any significant challenges with the acquisition of the regulatory permits for the upstream Highway 101 project and is moderately confident it will receive the permits necessary to complete construction of the local-state-funding-only project by the Safe, Clean Water Program's identified completion date. The SFCJPA has conducted stakeholder meetings with regulators to address their concerns and has incorporated their comments in the EIR to facilitate the permitting process. The SFCJPA continues its effort in preparing applications for regulatory permits to construct the upstream of Highway 101 project. Permit applications will be submitted in summer 2021 to acquire permits by the fall of 2022.

Jurisdictional Complexity: High confidence

The jurisdictional complexity of this project is unparalleled among Safe, Clean Water projects, as this project requires cooperation with the SFCJPA and its member agencies, which include Valley Water, the cities of Palo

Alto, East Palo Alto and Menlo Park and the San Mateo County Flood and Sea Level Rise Resiliency District (previously known as San Mateo County Flood Control District). In addition, there are key project stakeholders, including USACE and Stanford University's Searsville Dam Project. Despite this, Valley Water has high confidence that the jurisdictions will continue to work together to accomplish the common goal of providing flood protection along San Francisquito Creek. The SFCJPA continues to work very closely with its member agencies to further this project along, and staff from all member agencies meet regularly ensure a strong collaborative relationship is maintained.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

BEFORE: View of SF Creek from East Bayshore.

AFTER: View of SF Creek from East Bayshore.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Upper Llagas Creek flooding.

ON TARGET

Project E6 FY21 Highlights

- Began Phase 1 construction in September 2019.
- Phase 2A construction was awarded in April 2021. Construction is expected to be completed in FY24.
- Working with the National Resources Conservation Service of the U.S. Department of Agriculture to possibly secure grant funding for Phase 2B construction.

Project E6

Upper Llagas Creek Flood Protection Project Buena Vista Avenue to Llagas Road – Morgan Hill, San Martin, Gilroy

Preferred project: A federal-state-local partnership

This project continues a Clean, Safe Creeks project in partnership with the U.S. Army Corps of Engineers (USACE) and the state to plan, design, and construct improvements along 13.9 miles of channel. The project extends from Buena Vista Avenue to Wright Avenue, including West Little Llagas Creek in downtown Morgan Hill. The federally authorized preferred project protects the urban area of Morgan Hill from a 1% (or 100-year) flood, and reduces the frequency of flooding in surrounding areas. Construction includes channel modifications and replacement of road crossings. Valley Water continues to work with Congress to aggressively pursue federal funds to bring this project to full fruition. In 2012, project limits were extended 2,700 feet upstream to Llagas Road to address public concerns.

Flooding History and Project Background

The area sustained damage in 1937, 1955, 1958, 1962, 1963, 1969, 1982, 1986, 1996, 1997, 1998, 2002, 2004, 2008, 2009, 2011 and 2017. In 2009, many businesses and residences in downtown Morgan Hill were flooded under 1 foot of water. The project builds on the planning, design and property acquisition initiated under the Clean, Safe Creeks plan of 2000.

Benefits

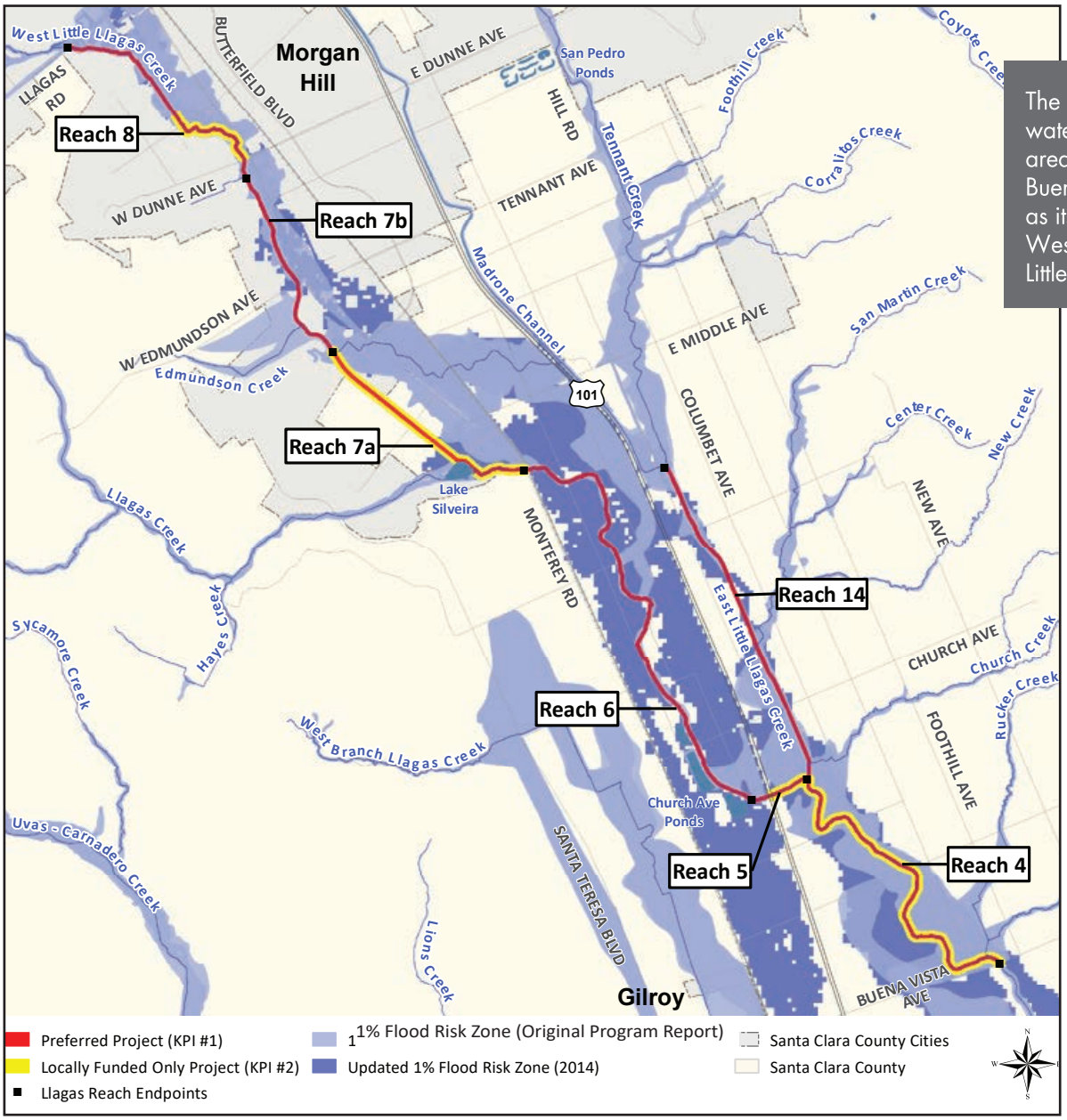
- Preferred project provides 1% flood capacity for 4 miles of channel in downtown Morgan Hill, protecting approximately 1,100 homes and 500 businesses
- Preferred project provides 10-year flood protection to approximately 1,300 agricultural acres in Morgan Hill, Gilroy and San Martin
- Locally-funded-only project provides 1% flood protection for a limited number of homes and businesses in Morgan Hill
- Improves stream habitat and fisheries
- Creates additional wetlands
- Improves stream water quality
- Identifies opportunities to integrate recreation improvements with the City of Morgan Hill and others as appropriate

Key Performance Indicators (15-year Program)

1. Preferred project with federal and local funding: Provide flood protection to 1,100 homes, 500 businesses, and 1,300 agricultural acres, while improving stream habitat.
2. Construct flood protection improvements along Llagas Creek from Buena Vista Avenue to Highway 101 in San Martin (Reaches 4 and 5 (portion), Monterey Road to Watsonville Road in Morgan Hill (Reach 7a), approximately W. Dunne Avenue to W. Main Avenue (portion of Reach 8), and onsite compensatory mitigation at Lake Silveira .

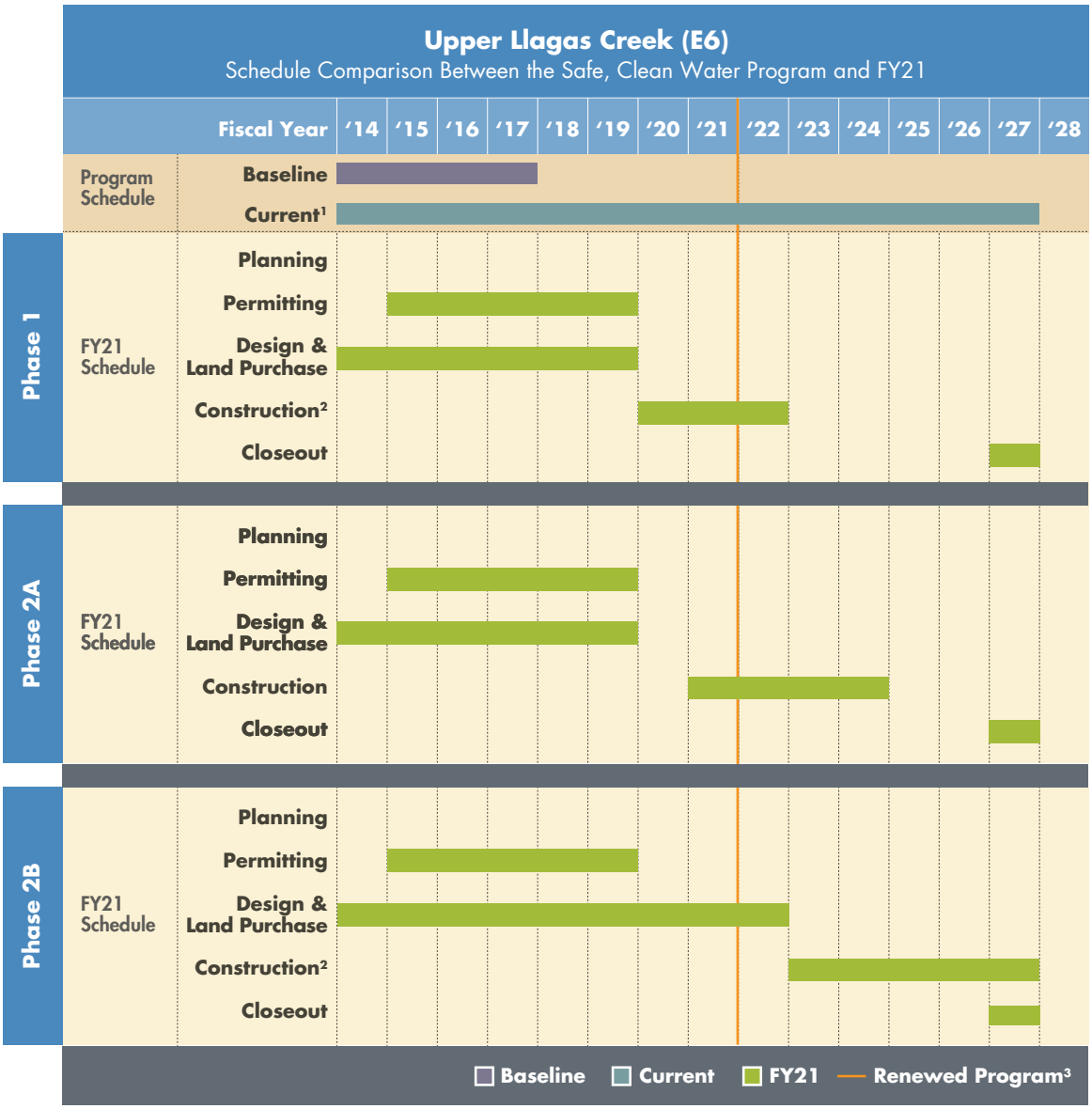
Geographic Area of Benefit: Morgan Hill, San Martin and Gilroy

Project Location



The **Upper Llagas Creek** watershed encompasses the area of Llagas Creek north of Buena Vista Avenue as well as its tributaries, including the West Little Llagas and East Little Llagas Creeks.

Schedule



[1] Board approved schedule adjustments through the change control processes in FY16, FY17 & FY19.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ADJUSTED
FY 16	ADJUSTED
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ADJUSTED
FY 20	ADJUSTED

Status for FY21: ON TARGET

Progress on KPI #1 and #2 (combined):

In FY20, the Board approved a modification to the local-funding-only project resulting in the current KPI #2, which is being implemented in two phases of Phase 1 and Phase 2A.

Phase 1 – Reaches 4, 5 (portion), and 7A (Buena Vista Avenue to Highway 101 in San Martin and from Monterey Road to Watsonville Road in Morgan Hill)

- Construction of Phase 1 began in FY20. Flood protection improvements are expected to be completed in FY22, followed by a three-year plant establishment period.

Phase 2A --- A portion of Reach 8 from Ciolino Avenue upstream to approximately 300 feet north of the existing West Main Avenue and Hale Avenue intersection. It also includes constructing the proposed approximately 2,300 linear feet horseshoe-shaped underground high-flow diversion tunnel and approximately 1,600 linear feet of twin reinforced concrete box culverts (10 ft x 10 ft) upstream and downstream of the proposed tunnel.

- Phase 2A right-of-way has been acquired.
- Phase 2A construction was advertised for construction on January 12, 2021, and the project was awarded on April 13, 2021, to Flatiron West, Inc. for the bid of $43,989,600. Construction is expected to be completed in FY24.

Phase 2B --- Construction of the remaining portion of Reach 5 and all of Reach 6 (Highway 101 upstream to Monterey Road), Reach 7B (Watsonville Road to Ciolino Avenue), the remaining portion of Reach 8 (approximately West Main Avenue to Llagas Road), and Reach 14 (confluence with Reach 4 upstream to Sycamore Avenue).

Phase 2B construction consists of approximately 1,900 linear feet of twin reinforced concrete box culverts (10 ft x 10 ft), creek modifications and excavation by widening and deepening, installation of culverts at various street crossings, construction of an inlet basin weir split-flow structure, bridge underpinning work, installation of instream complexities, removal of plantings and non-native plantings, habitat enhancements, revegetation, utility relocations and coordination, outfall modifications, aggregate base maintenance roads, access ramps, traffic controls/

detours, fencing, soil testing as required for off-site disposal, concrete and other miscellaneous work, community outreach and coordination.

- Construction is anticipated to take approximately three (3) years to complete, followed by a three-year plant establishment period.
- Phase 2B right-of-way requires the acquisition of seven (7) additional parcels and six (6) temporary construction easements. These acquisitions are anticipated to be completed in FY22.
- Phase 2B construction is anticipated to cost approximately $80 million.
- Phase 2B is still pending funding and Valley Water is seeking external funding, including a National Resources Conservation Service (NRCS) grant, as well as a low-cost federal loan under the Water Infrastructure Finance and Innovation Act of 2014. The project is near shovel-ready and the current estimated schedule is for construction to begin in FY23.

Upon completion of Phases 1, 2A and Phase 2B, the project will provide flood protection to 1,100 homes, 500 businesses and 1,300 agricultural acres while improving stream habitat.

Phase 1 and Phase 2 Combined

- FEMA accepted the Conditional Letter of Map Revision package on October 19, 2016. After the project is constructed, Valley Water will prepare a Letter of Map Revision for the city to submit to FEMA to initiate a revision to the flood maps.
- Valley Water has acquired approximately 2,000 linear feet of stream channel and present-day Lake Silveira to implement the compensatory mitigation recommended by the U.S. Fish and Wildlife Service (USFWS). The construction of this mitigation element began on May 1, 2020.
- The project has received all permits from state and federal regulatory agencies.
- The project was approved and the Final Environmental Impact Report was certified by the Valley Water Board on June 10, 2014. Valley Water will utilize the results of the California Rapid Assessment Method (CRAM) analysis to provide an assessment of the pre- and post-project environmental conditions within the project reaches, including the compensatory mitigation site, Lake Silveira. The analysis will also provide an assessment of the performance/success of the revegetation sites, and demonstrate compliance with regulatory performance criteria and requisite targets. A draft report was completed and received by Valley Water in May 2016 for review. The final pre-project environmental condition report was completed in March 2017.

Financial Information

In FY21, 94% of the annual project budget was expended.

The underspending was due to delays in the start of construction for Phase 2A. Phase 2A construction start was delayed by several months due to efforts to coordinate and incorporate a portion of the City of Morgan Hill's Hale Avenue Extension Project (the portion that overlaps Valley Water Phase 2A) into the Valley Water construction documents.

Financial Summary ($ Thousands)
E6. Upper Llagas Creek

Fiscal Year 2020–2021									15-year Program	
Project No. and Name	Adopted Bduget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
					Actual	Encumbrance	Total			
26174051 Real Estate Acquisitions	$0	$2,703	$0	$2,703	$2,671	$0	$2,671	99%	$73,606	51%
26174052 Construction	$46,274	$953	($47)	$47,180	$38,198	$7,502	$45,700	97%	$169,879	55%
26174054 Design	$0	$1,856	$0	$1,856	$492	$0	$492	26%	$19,587	57%
Total	**$46,274**	**$5,512**	**($47)**	**$51,739**	**$41,361**	**$7,502**	**$48,863**	**94%**	**$263,071**	**54%**

Opportunities and Challenges

Environmental Impact Statement

The USACE issued the Final Environmental Impact Statement in November 2018. The USACE signed the Record of Decision and issued a 404 permit to enable construction to proceed on March 26, 2019.

Confidence Levels

Phase 1, Phase 2A, and Phase 2B of the project will be constructed independently.

Phase 1

Schedule: High confidence

Phase 1 construction began in FY20 and is anticipated to be completed in FY22, not including the post-construction three-year native plant revegetation maintenance establishment period.

Funding: High confidence

Fully funded through the Safe, Clean Water Program.

Jurisdictional Complexity: High confidence

Cooperation on the Project has included, U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), Central Coast Regional Water Quality Control Board, California Department of Water Resources (DWR) (state subventions), City of Morgan Hill and the County of Santa Clara.

Phase 2A

Schedule: High confidence

Phase 2A construction was awarded on April 13, 2021 and construction is expected to begin in late FY21 and is anticipated to be completed in FY24.

Funding: High confidence

Fully funded through the Safe, Clean Water Program.

Jurisdictional Complexity: High confidence

Given the successful start of Phase 1 construction, confidence is high that cooperation on Phase 2A of the project will continue with the USACE, CDFW, Central Coast Regional Water Quality Control Board, DWR (state subventions), City of Morgan Hill and the County of Santa Clara.

Phase 2B

Schedule: Moderate confidence

Valley Water continues to work on the remaining Phase 2B acquisitions. Valley Water must obtain the necessary rights-of-way to be able to advertise Phase 2B of the project for construction. Valley Water is moderately confident that property acquisitions will be completed in FY22. Funding for Phase 2B is still pending. The current estimated schedule is for construction to begin in FY23. The project will take three (3) years to construct, followed by a three-year native plant revegetation establishment period.

Funding: Moderate confidence

Valley Water will meet KPI #1 with the completion of Phase 2B construction. Valley Water continues to pursue approximately $80 million in external funding through state and federal funding opportunities. It includes an NRCS grant, as well as a low-cost federal loan under the Water Infrastructure Finance and Innovation Act of 2014. Valley Water is hopeful the Federal Government may pass a stimulus bill to fund shovel ready projects to restart the U.S. economy and Phase 2B may qualify as a shovel ready project.

Jurisdictional Complexity: High confidence

Given the successful start of Phase1 construction and the successful award of Phase 2A construction, confidence is high that cooperation on the Phase 2B of the project will continue with the USACE, CDFW, Central Coast Regional Water Quality Control Board, DWR (state subventions), City of Morgan Hill and the County of Santa Clara.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Chicago Marsh - S.F. Bay Shoreline

ON TARGET

Project E7 FY21 Highlights

For EIAs 1-10:

- Contributed $850,000 towards the local cost share for Phase II Feasibility Study.
- Continued to coordinate with the South Bay Salt Pond Restoration Phase 2 Project for Mountain View, EIAs 4 and 5, flood risk management levee.

Project E7

San Francisco Bay Shoreline Protection Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

This project is a partnership with the California State Coastal Conservancy, the U.S. Army Corps of Engineers (USACE), and regional stakeholders to provide tidal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities. Initial construction for flood protection is planned for Economic Impact Area (EIA) 11, which is the urban area of North San José and the community of Alviso.

This project relies on federal participation from USACE to review and approve the plans. Without federal participation, Valley Water cannot implement additional planning, design and construction due to limited available funding. The proposed Safe, Clean Water funding provides Valley Water's cost share to complete the planning study for EIAs 1-10, and provides a portion of Valley Water's cost share toward design and construction of flood protection improvements in the North San José area (EIA 11), in and near Alviso.

Flooding History and Project Background

This project stems from the 2003 acquisition of thousands of acres of former South Bay salt production ponds, purchased for restoration with combined public and private funding. The South Bay Shoreline Protection Project is an important component of the South Bay Salt Ponds Restoration Project, a large, multi-agency effort to restore 16,500 acres of tidal wetlands which involves all South Bay cities that meet the San Francisco Bay. Without incorporating flood protection measures, proposed recreational use and environmental restoration is likely to reduce the effectiveness of existing shoreline levees formerly maintained for salt production. Project E7 would upgrade levees to protect Silicon Valley's "Golden Triangle," bounded by Highways 101, 237 and 880, and extending north into the Baylands of Milpitas. Multiple flood events since the mid-1990s have damaged business operations in this area, now home to major high-tech corporations including Intel, Google, Yahoo, Cisco, and others. The project would also protect Alviso neighborhoods, as well as important infrastructure such as airports and sewage treatment plants.

The existing multi-agency partnerships for the South Bay Salt Ponds Restoration project and the San Francisco Bay Shoreline Study ensure that all goals for this largest wetland restoration on the West Coast will be incorporated. The Safe, Clean Water measure provides a share of the total funding needed for planning

and design phases for the full shoreline project area. It also provides the funding needed to purchase lands, easements and rights-of-way as necessary to construct improvements in EIA 11, and a share of the construction costs for that portion of the project.

Benefits

- Protects more than 1,000 residential structures and 100 non-residential structures (EIA 11)
- Provides planning and design to protect nearly 4,700 acres and more than 5,000 structures, including roads, highways, parks, airports and sewage treatment plants in all of Santa Clara County
- Allows for the restoration of 2,900 acres of tidal marsh and related habitats (EIA 11)
- Provides educational, recreational and public access opportunities

Key Performance Indicators (15-year Program)

1. Provide portion of the local share of funding for planning and design phases for the former salt production ponds and Santa Clara County shoreline area.
2. Provide portion of the local share of funding toward estimated cost of initial project phase (EIA 11).

Geographic Area of Benefit: Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

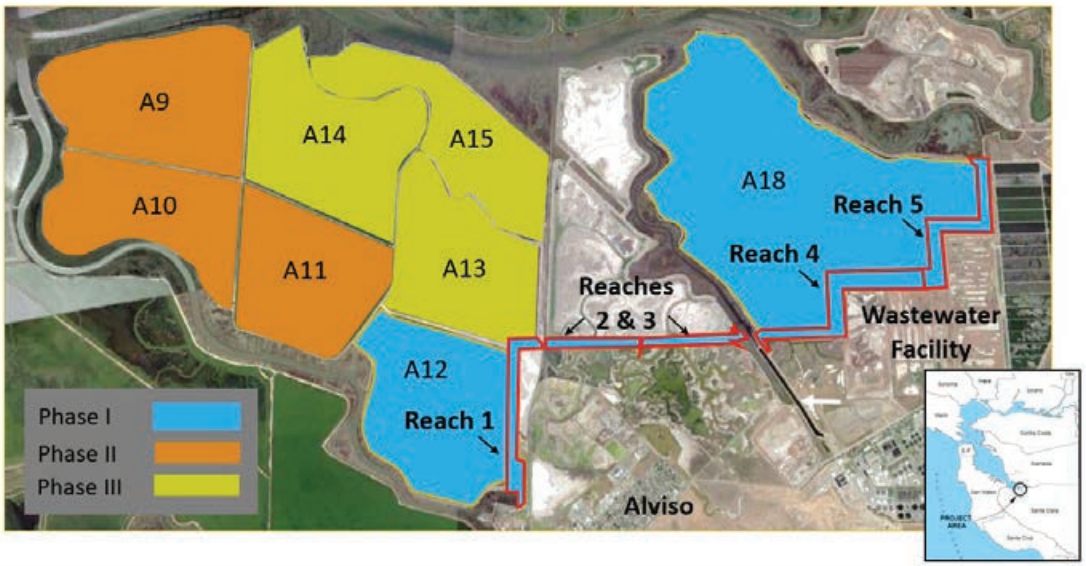
Project Location

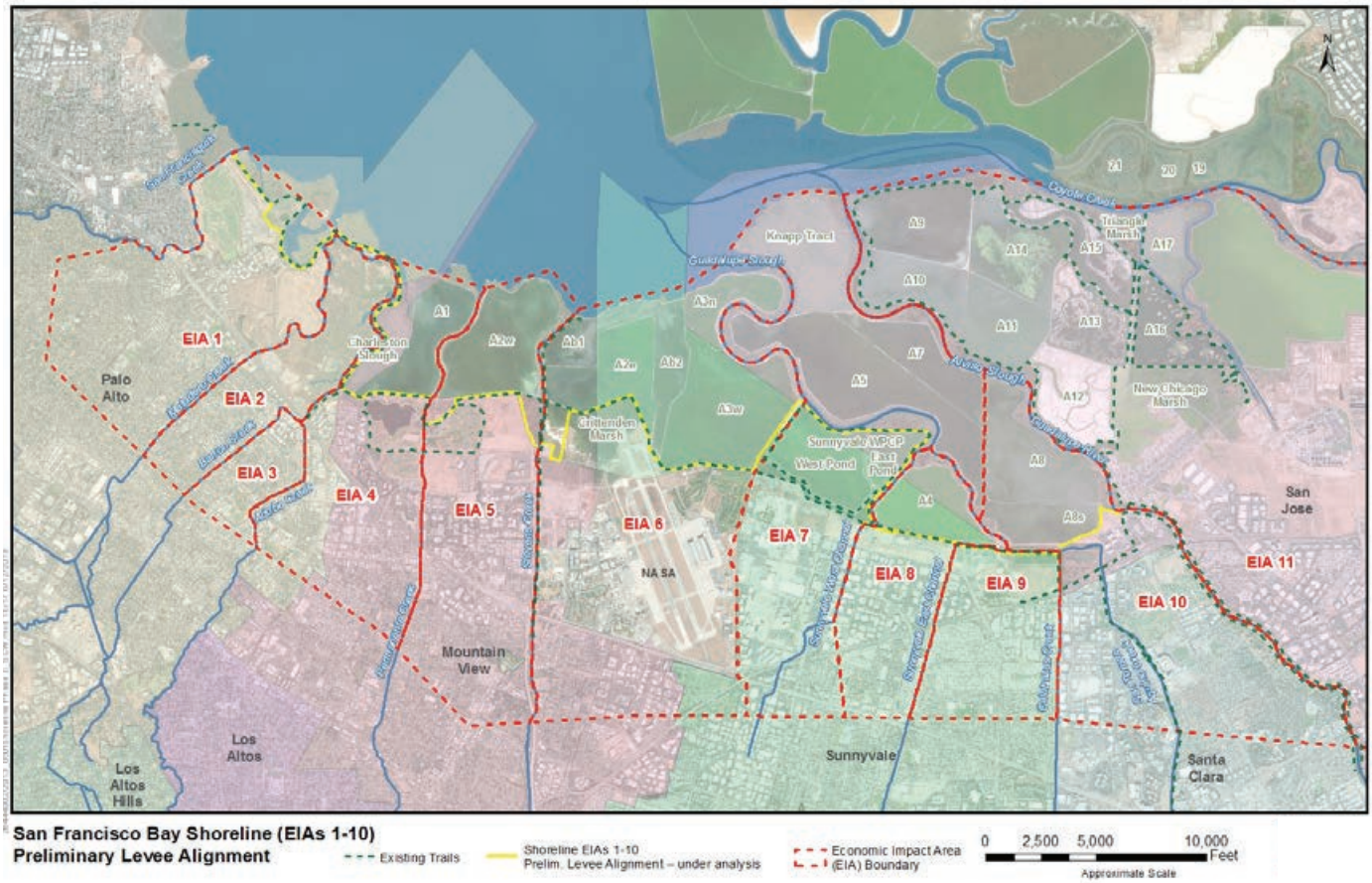
South San Francisco Bay Shoreline Protection
E1A 11 Project Construction Phases

Phase 1
(2021–2024)

Phase 2
(2027)

Phase 3
(2032)





Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ON TARGET

Progress on KPI #1:

<u>San Francisco Bay Shoreline Protection – San Francisquito Creek to Guadalupe River (EIAs 1-10)</u>

- In FY20, Valley Water, the State Coastal Conservancy and USACE entered into a Feasibility Cost Share Agreement (FCSA) for the South San Francisco Bay Shoreline Phase II Feasibility Study (Phase II Feasibility

Study). The USACE Phase II Feasibility Study focuses on EIAs 1-4, from San Francisquito Creek in Palo Alto to Permanente Creek in Mountain View. In FY21, Valley Water contributed $850,000 towards the local cost -share for the Phase II Feasibility Study.

- In FY21, the USACE submitted an exemption request to their USACE Headquarters to extend the feasibility study schedule and budget. An exemption from the USACE standard three-year feasibility study is required due to California's more stringent environmental requirements. Upon approval of the exemption request, the next Phase II Feasibility Study milestone (Tentatively Selected Plan) is scheduled for 2022.
- The USACE will seek funds for a future Phase III Feasibility Study focusing on the remaining EIAs 5-10, from Permanente Creek in Mountain View to Guadalupe River in San José.
- Valley Water continued to coordinate with the South Bay Salt Pond Restoration Phase 2 Project (SBSPRP) for the Mountain View, EIAs 4 and 5, flood risk management measures. Valley Water is also working with the SBSPRP for EIA 10, including exploring the re-routing of San Tomas and Calabazas creeks into Pond A8.

Progress on KPI #2: (Completed in FY20)

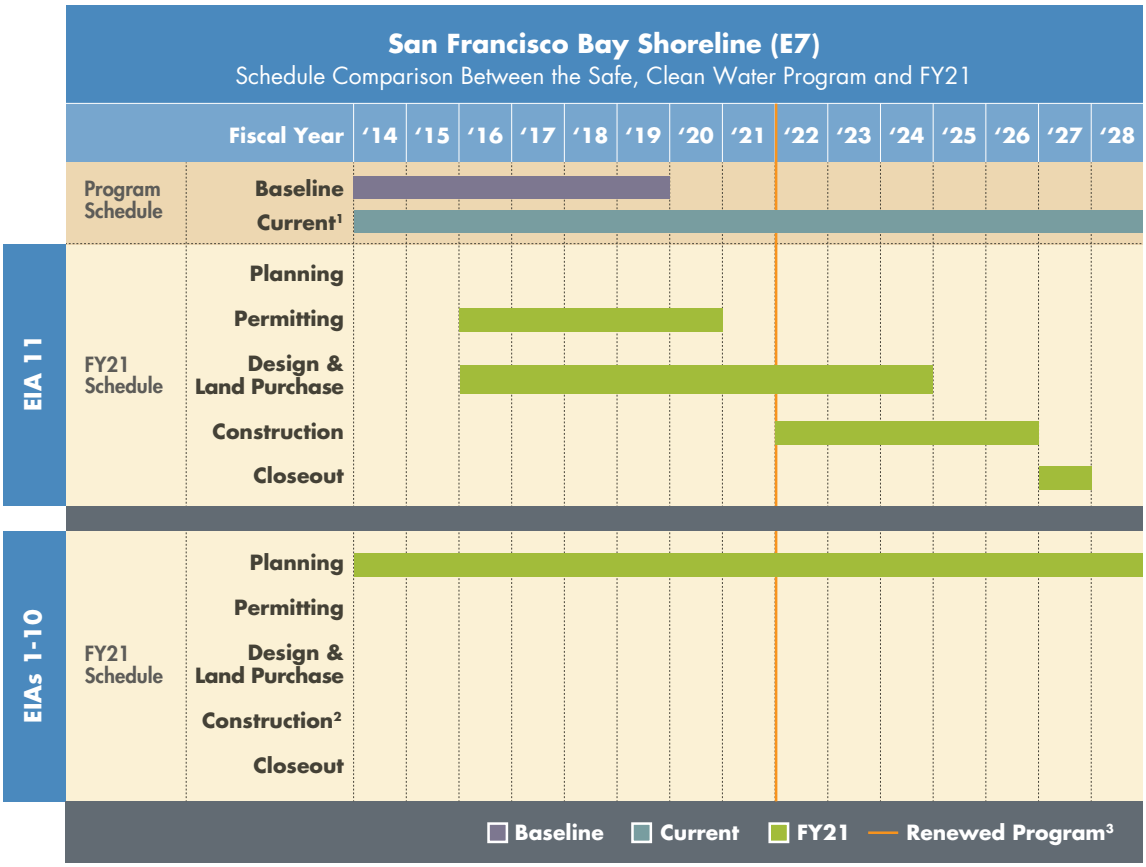
San Francisco Bay Shoreline Protection – Urban area of North San José/Alviso/San José-Santa Clara Regional Wastewater Facility (EIA 11)

- In December 2019, Valley Water fully utilized all the Safe, Clean Water Program funds allocated to KPI #2 and delivered the KPI.

Financial Information

In FY21, for KPI #1, 99% of the annual budget was expended. Valley Water provided a total of $850,000 in Safe, Clean Water Program cash to USACE as Valley Water's local cost-share for the Phase II Feasibility Study.

Specific activities included biweekly project team meetings, plan formulation workshops, ecosystem restoration workshops, ecological modeling, hydraulic modeling, resource agency and local jurisdiction meetings and engagement, and supporting USACE efforts to prepare the materials for the Tentatively Selected Plan milestone.



[1] Board approved a schedule adjustment through the change control process in FY17.
[2] Construction phases are not funded by the Safe, Clean Water Program.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Financial Summary ($ Thousands)
E7. San Francisco Bay Shoreline Protection

Fiscal Year 2020–2021									15-year Program	
Project No. and Name	Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
					Actual	Encumbrance	Total			
26444002 EIAs 1-10	$0	$754	$530	$1,284	$1,270	$0	$1,270	99%	$6,363	67%
26444001 EIA 11	$5	$19	$0	$24	$24	$0	$24	99%	$17,516	100%
Total	**$5**	**$772**	**$530**	**$1,308**	**$1,294**	**$0**	**$1,294**	**99%**	**$23,879**	**91%**

Opportunities and Challenges

Confidence levels

San Francisco Bay Shoreline Protection – San Francisquito Creek to Guadalupe River (EIAs 1-10)

Schedule: Moderate confidence

The USACE initiated the Phase II Feasibility Study in September 2019 and additional time is required to complete the study effort because the Bay Area is one of the most stringent regulatory environments in the nation and required more time to complete the coordination and due diligence work that the resource agencies have come to expect to have a permittable project. An exemption request has been submitted to USACE Headquarters for approval to increase the study phase from three (3) years to five-and-a-half years.

Funding: Moderate confidence

Additional federal funds are also required to complete the extensive analysis required to meet both regulatory and USACE requirements. The exemption request submitted to USACE Headquarters increases the feasibility cost from $3 million to $5.9 million. Since Valley Water shares 50% of the cost, our share will increase from $1.5 million to $2.95 million when the exemption request is approved. Meanwhile, USACE Headquarter approval of additional federal funding continues to be a challenge.

Permits: N/A

KPI #1 efforts do not require permits.

Jurisdictional Complexity: Moderate confidence

The confidence level is moderate due to the complexity involved with extensive regional coordination for a significant coastal flood protection project with an estimated price tag of nearly $800 million. In FY20, the USACE, Valley Water and State Coastal Conservancy agreed to continue a phased study approach in which USACE will study EIAs 1-4 in the Phase II Feasibility Study, followed by seeking federal funds to study the remaining EIAs 5-10 in a future Phase III Feasibility Study. Other agencies that Valley Water is continuing to work with includes the cities of Palo Alto, Mountain View and Sunnyvale, along with the National Aeronautics and Space Administration's (NASA) Ames Research, United States Fish and Wildlife Service, and Midpeninsula Regional Open Space District. Currently Safe, Clean Water provides approximately $5 million for a portion of the local share of funding to support only planning efforts.

See Appendix D: Capital Projects Jurisdictional Complexities for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Upper Guadalupe River Reach 12.

ADJUSTED

Project E8 FY21 Highlights

- For Reach 6, construction contract awarded for the gravel augmentation project, Aquatic Habitat Improvement Project. Construction is expected to be completed in FY22.
- The USACE 's General Re-evaluation Study began in January 2021 and will take approximately three (3) years to complete. A new project schedule will be developed following the completion of the General Re-evaluation Study.

Project E8

Upper Guadalupe River Flood Protection Highway 280 to Blossom Hill Road – San José

Preferred project: A federal-state-local partnership

This federally authorized project continues a Clean, Safe Creeks project in partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct improvements along 5.5 miles of channel extending from Interstate 280 to Blossom Hill Road. Improvements include channel widening, construction of floodwalls and levees, replacement of road crossings and planting of streamside vegetation. Reducing flood frequency and bank erosion will improve water quality, while planned mitigation measures will give fish access to an additional 12 miles of habitat within and upstream of the project reach.

Flooding History and Project Background

Damaging flood events occurred in 1982, 1983, 1986, 1995 and 1998. Severe flooding in 1995 damaged more than 150 homes in the Gardner, Willow Glen, and South San José residential districts, and shut down Highway 87 and the parallel light rail line – both major commuter thoroughfares. Freeway and light rail flooding occurred again in 1998.

The Upper Guadalupe River Flood Protection project was authorized construction by the USACE in 1999 and received local funding in 2000, followed by the start of construction in 2008. Fish passage, erosion protection and other components were constructed earlier.

To increase the level of flood protection while keeping the preferred project viable, the local-only plan funded by Clean, Safe Creeks was modified by Valley Water Board in March 2012 to provide a basis to advance the full federal project as soon as funds become available. The plan is now to acquire all necessary rights-of-way and relocate bridges and utilities in preparation for the full, preferred project. The modified plan also includes design and construction for both Reach 6 (Interstate 280 to the Union Pacific Railroad crossing) and Reach 12 (Branham Lane to Blossom Hill Road).

Benefits

- Preferred project will construct 1% (or 100-year) flood conveyance capacity for 5.5 miles of channel in San José, protecting approximately 6,280 homes, 320 businesses and 10 schools/institutions
- Local funding only constructs improvements to 4,100 linear feet to convey 1% flow

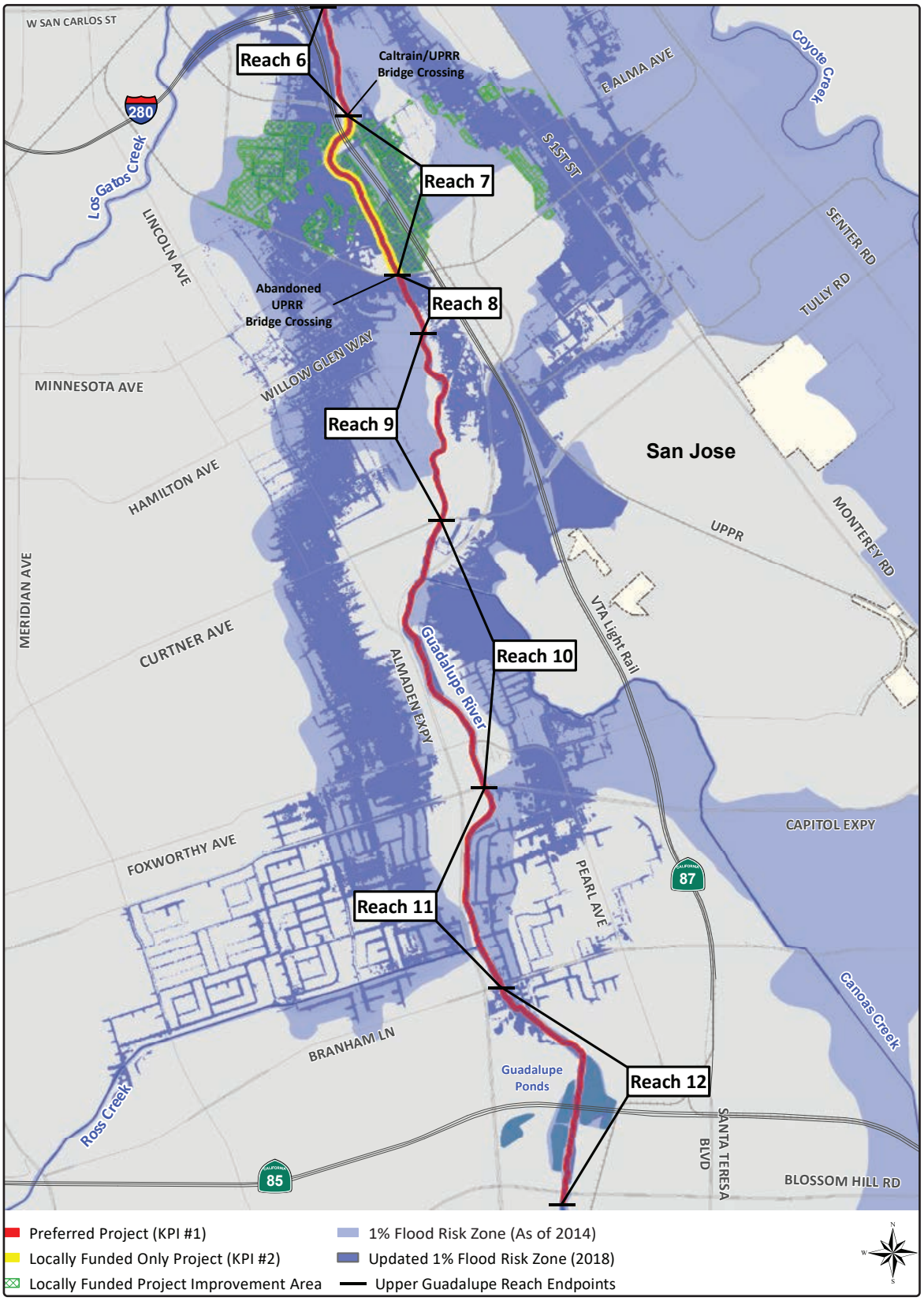
- Improves stream habitat values and fisheries
- Improves stream water quality
- Allows for creekside trail access

Key Performance Indicators (15-year Program)

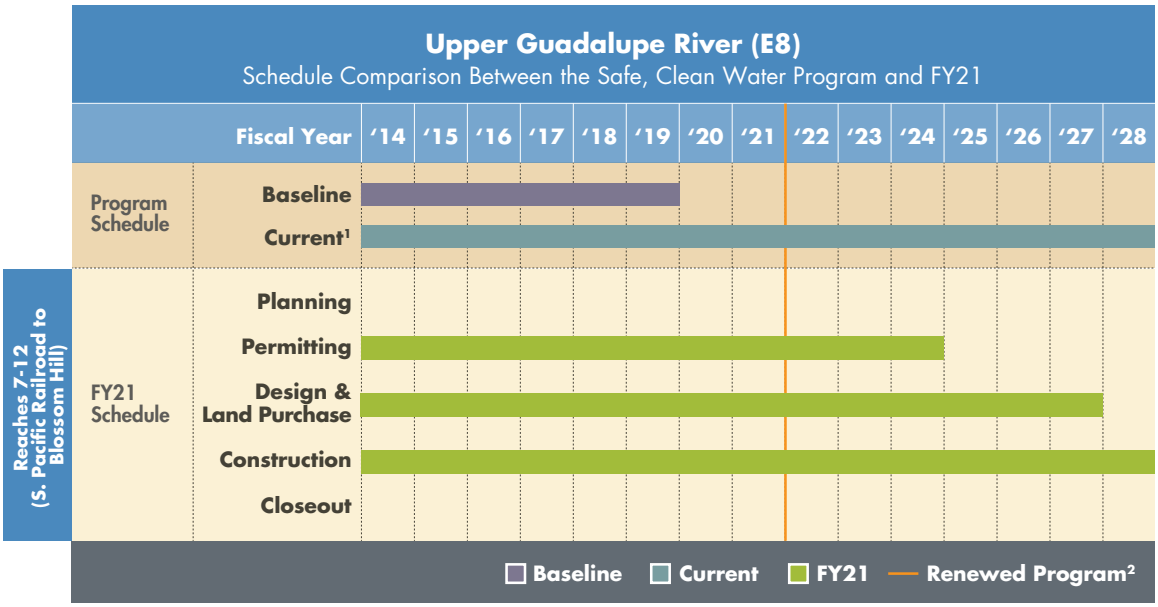
1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% flood protection to 6,280 homes, 320 businesses and 10 schools and institutions.
2. With local funding only: Construct flood protection improvements along 4,100 feet of Guadalupe River between Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive. Flood damage will be reduced; however, protection from the 1% flood is not provided until completion of the entire Upper Guadalupe River Project.

Geographic Area of Benefit: San José

Project Location



Schedule



[1] Board approved a schedule adjustment through the change control process in FY16, FY20 & FY21.
[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ADJUSTED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: ADJUSTED (Schedule Adjustment)

While the locally funded project requires Valley Water to only construct flood protection improvements along Reach 7, Valley Water has used local funding under the Safe, Clean Water Program (and the preceding Clean, Safe Creeks Program) to complete Reaches 6, 10B and 12 and move the project forward. For more details, see Opportunities and Challenges segment.

Progress on KPI #1 and #2 (combined):

Reach 6 (from Interstate 280 to the UPRR bridge crossing downstream of Willow Street)

- In June 2021, Valley Water awarded the construction contract for the gravel augmentation project. Construction is expected to begin in July 2021and be completed in December 2021 (FY22).

Reaches 7 to 12 (from the UPRR bridge crossing downstream of Willow Street to Blossom Hill Road)

- Reach 7, stretching from UPRR bridge crossing downstream of Willow Street to the abandoned UPRR bridge upstream of Alma Avenue, is the local funding only project, KPI #2. Valley Water has adequate local funding to complete this reach. Furthermore, Reaches 6,10B and 12 of the project were completed by 2015.
- Since FY15, lack of federal funding has stalled the design and construction of the flood protection elements of Reaches 7-11 (excluding Reach 10B). USACE has completed 65% design documentation for Reaches 7 and 8 and has been waiting for federal funds to complete the design and begin construction. Due to project construction cost estimate increases, in FY20, USACE received funding to perform a General Re-evaluation Study, a study to re-evaluate the scope of the project and the associated benefits and costs that can help make the project more competitive for federal funding. The General Re-evaluation study began in January 2021 and will take approximately three (3) years to complete. A new project schedule will be developed following the completion of the General Re-evaluation Study.

Financial Information

Reach 6 (I-280 to Southern Pacific Railroad) project (KPIs #1 and #2) expended 85% of its FY21 budget. The under-expenditure was because construction of the gravel augmentation project will begin in July 2021 and anticipated labor costs for construction oversight allocated for FY21 will be spent in FY22.

Reaches 7-12 (Southern Pacific Railroad to Blossom Hill Road) project (KPIs #1 and #2) expended 25% of its FY21 budget. The under-expenditure in FY21 was due to Valley Water's decision not to move forward with designing and constructing Reach 7 using local funding at this time. Valley Water and the USACE worked together to move forward with the General Re-evaluation Study that received $1.5 million in federal funding. Valley Water will also contribute $1.5 million to fund the local share of the General Re-evaluation Study.

Financial Summary ($ Thousands)
E8. Upper Guadalupe River

Fiscal Year 2020–2021									15-year Program	
Project No. and Name	Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
					Actual	Encumbrance	Total			
26154002 Reach 6 (I-280 to S. Pacific Railroad)	($0)	$209	$0	$209	$178	$0	$178	85%	$7,627	34%
26154003 Reaches 7-12 (S. Pacific Railroad to Blossom Hill)	($0)	$9,194	$0	$9,194	$990	$1,325	$2,315	25%	$89,987	41%
Total	**($0)**	**$9,403**	**$0**	**$9,403**	**$1,168**	**$1,325**	**$2,493**	**27%**	**$97,614**	**41%**

Opportunities and Challenges

Schedule Adjustment and Lack of Federal Funding

In FY21, the Board adjusted the construction schedule for the local funding only project (KPI #2) with the project completion pushed back by three years from FY26 and now estimated to occur in FY29. This was necessary to allow USACE to conduct the General Re-evaluation Study for completion in FY24. Following the completion of the study, a new preferred project (KPI #1) will be developed. Meanwhile, if Valley Water were to assume the responsibility of continuing the design of the local funding only project in FY24, project construction could be completed in FY29.

Since FY15, lack of federal funding has stalled design and construction on the federal flood protection elements of the preferred project (KPI #1), comprising Reaches 7 to 11 (excluding 10B). Reaches 10B and 12, which are the mitigation elements of the project, were completed between 2012 and 2015 and Valley Water contributed local funding to complete these reaches.

Reach 7, stretching from the UPRR bridge crossing downstream of Willow Street to the abandoned UPRR bridge upstream of Alma Avenue, is the local funding only project (KPI #2) and Valley Water has adequate local funding to construct the project.

Meanwhile, due to the lack of federal funding, USACE has been focused on updating the total project costs to determine a path for future federal funding. In January 2021, the USACE began the General Re-evaluation Study, which is expected to take approximately three (3) years to complete. A new preferred project (KPI #1) schedule will be developed following the completion of the General Re-evaluation Study.

Confidence Levels

Reach 6 (I-280 to S. Pacific Railroad) Project

Schedule: High confidence

Valley Water obtained the Reach 6 gravel augmentation project regulatory permits in summer 2020, advertised and awarded the project in early 2021 and is expected to begin construction in summer 2021.

Funding: High confidence

This project is fully funded by the Safe, Clean Water Program.

Permits: High confidence

Valley Water obtained the state and federal regulatory permits for the project in summer 2020.

Jurisdictional Complexity: High confidence

Valley Water has jurisdiction over this reach and all the design elements.

Reaches 7-12 (S. Pacific Railroad to Blossom Hill) Project

Schedule: Low confidence

The schedule has been affected due to USACE not receiving federal funding for many years, which has delayed design and construction efforts for Reaches 7 & 8.

Funding: Low confidence

Federal funding appropriation continues to be the main challenge for this project. The project did receive federal funds in FY20 for General Re-evaluation Study of all elements of Reaches 7 to 12. The USACE will be evaluating the entire project to determine the preferred scope of work. Valley Water will need to continue working with USACE leadership and federal elected officials to encourage federal appropriations for the design and construction of the remaining project reaches.

Permits: Moderate confidence

USACE will acquire all the required permits once the General Re-evaluation Study is concluded and a path forward for the project is determined.

Jurisdictional Complexity: Low confidence

As a local sponsor, Valley Water is responsible for acquiring all the right-of-way and relocation of utilities. Even after Valley Water acquires easements or joint-use agreements for the project from Caltrans, the Joint Power Board/Caltrain and the City of San José, these agencies will continue to have jurisdiction over the Upper Guadalupe Flood Protection Project. Cooperation between the City of San José and the Joint Power Board/Caltrain has been satisfactory. Valley Water and City of San José were able to complete the purchase of right-of-way for the Willow Street and Alma Avenue bridge extension elements of the project. The Joint Power Board/Caltrain has been coordinating with Valley Water for their railroad bridge replacement project just upstream of Reach 6.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Other Capital Flood Protection Projects and Clean, Safe Creeks Grants Projects

On November 6, 2012, voters approved the Safe, Clean Water Program as a countywide special parcel tax for 15 years with a sunset date of June 30, 2028. This program replaced the Clean, Safe Creeks and Natural Flood Protection Plan, which voters approved in November 2000.

The following projects below were carried forward and fully transitioned into the Safe, Clean Water Program. The financial information reported herein includes only the funds that were carried forward and the expenditures made since the onset of the Safe, Clean Water Program.

Permanente Creek Flood Protection Completed (See Completed Projects, page 195)
San Francisco Bay to Foothill Expressway – Mountain View

Sunnyvale East and Sunnyvale West Channels Flood Protection
San Francisco Bay to Inverness Way and Almanor Avenue – Sunnyvale

Berryessa Creek Flood Protection (See Completed Projects, page 199)
Calaveras Boulevard to Interstate 680 – Milpitas and San José

Coyote Creek Flood Protection
Montague Expressway to Tully Road – San José

Calabazas Creek Flood Protection (See Completed Projects, page 203)
Miller Avenue to Wardell Road

Clean, Safe Creeks Grants Projects (See Completed Projects, page 206)

Sunnyvale East and Sunnyvale West Channels Flood Protection Projects

San Francisco Bay to Inverness Way and Almanor Avenue – Sunnyvale

In the early stages of the project design process, Valley Water project team decided to join both improvement projects into a single flood protection project with a single Environmental Impact Report (EIR) to reduce construction costs and minimize construction coordination issues between the 2 channels.

The West Channel extends approximately 3 miles and upgrades existing channel capacity to provide 1% (or 100-year) riverine flood protection for 47 acres of highly valuable industrial lands, including the Onizuka Air Force Base. The East Channel extends approximately 6.4 miles and upgrades existing channel capacity to provide 1% riverine flood protection for 1,618 parcels. Both projects decrease channel turbidity and sediment by repairing erosion sites, thereby improving water quality.

Benefits

- Provides 1% flood capacity for approximately 6.5 miles of channel along Sunnyvale East and approximately 3 miles of channel along Sunnyvale West within the City of Sunnyvale, protecting 1,618 properties (Sunnyvale East) and 47 acres (11 properties) of industrial land (Sunnyvale West)
- Improves stream water quality, by providing erosion control measures to decrease sediment and turbidity
- Identifies opportunities to integrate recreation improvements with the City of Sunnyvale and others as appropriate

Key Performance Indicator (5-year Implementation Plan)

1. Provide riverine flood protection for 1,618 properties and 47 acres (11 parcels) of industrial land, while improving stream water quality and providing for recreational opportunities.

Geographic Area of Benefit: Sunnyvale

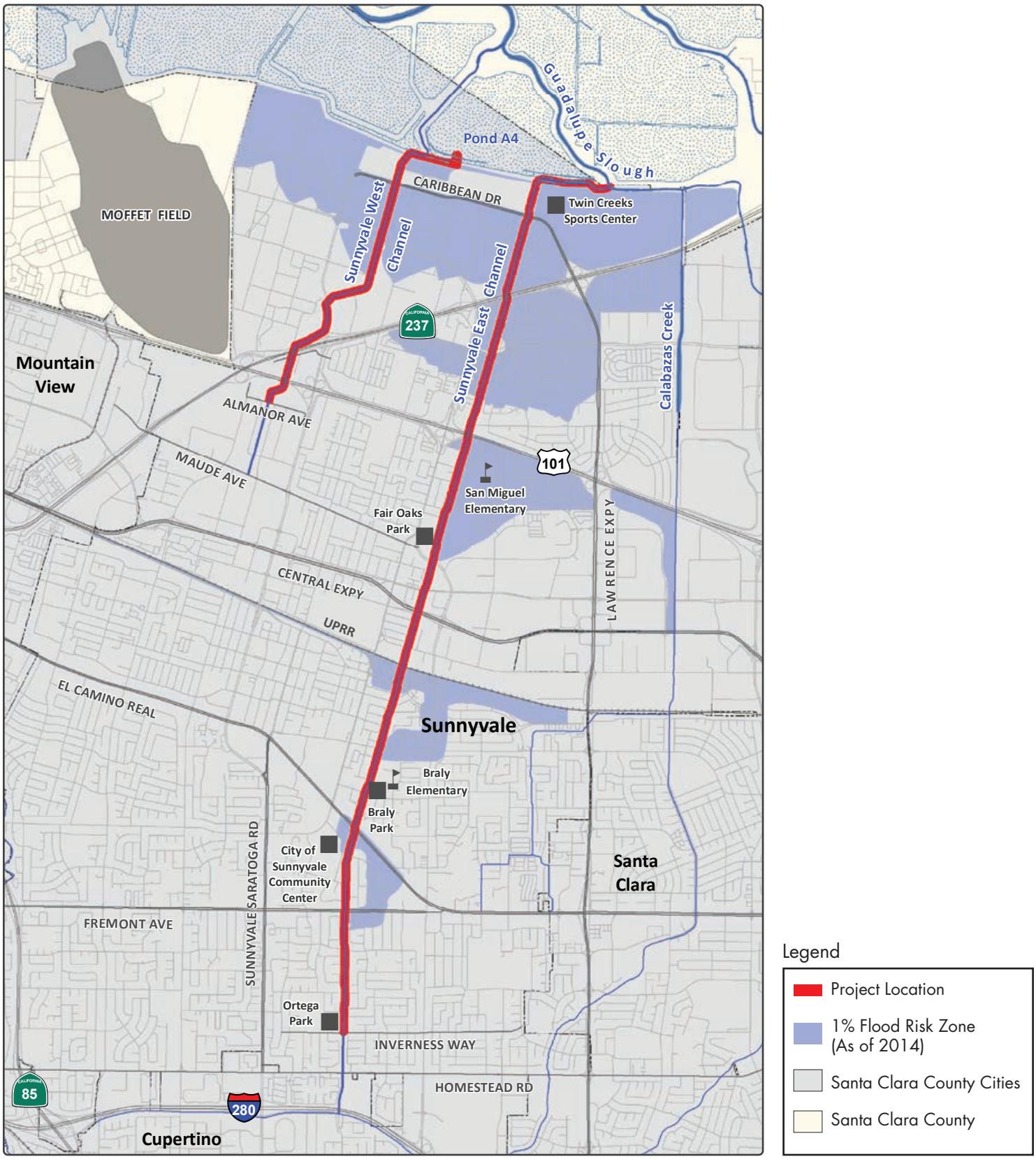
Southern view of the Sunnyvale East Channel.

ADJUSTED

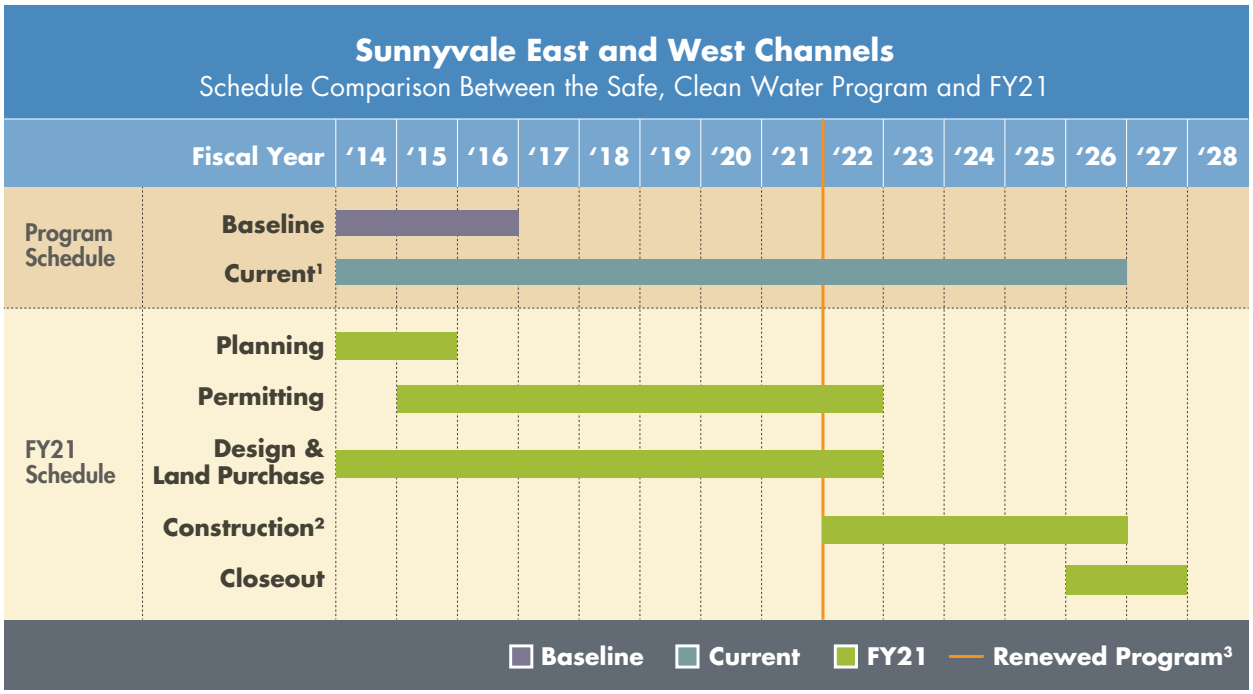
Project FY21 Highlights

- Continued work on the final design that is expected to be completed in FY22.
- Continued work on acquiring a parcel or leasing agreement from the adjacent properties owner for construction staging, as well as temporary construction easements.
- Finalized a costsharing agreement amendment with the City of Sunnyvale for construction of recreational trails, extending an original 2016 cost sharing agreement to December 2025.

Project Location



Schedule



[1] Board approved schedule adjustments through the change control process in FY16, FY18, FY20 & FY21.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	ADJUSTED
FY 16	ADJUSTED
FY 17	ON TARGET
FY 18	ADJUSTED
FY 19	ADJUSTED
FY 20	ADJUSTED

Status for FY21: ADJUSTED (Schedule Adjustment)

Progress on KPI #1:

- The final design is underway and is expected to be completed in FY22 when the City of Sunnyvale and Resource Agency permit comments are incorporated.

- Most right-of-way and temporary staging area easements for project construction have been acquired. Valley Water continues to work on executing leasing agreements from the adjacent property owners, Santa Clara County and the San Francisco Public Utilities Commission (SFPUC), for temporary construction staging and temporary construction easements. All leasing agreement acquisitions are anticipated to be executed in FY22, prior to construction advertisement.
- Valley Water submitted all required permit applications in FY17 to the various state and federal regulatory agencies and is currently in negotiations with these agencies to acquire the necessary permits. These activities are expected to be finalized in FY22, which would allow project construction to begin in FY22, with anticipated completion in FY26.
- On April 24, 2018, Valley Water's Board of Directors approved a Memorandum of Understanding (MOU) with Google, LLC (Google) to form a partnership. Subsequently, a cost-sharing agreement with Google will be negotiated after Google has complied with California Environmental Quality Act (CEQA) requirements for their proposed project alterations. The City of Sunnyvale is acting as the lead agency for CEQA for these proposed alterations. Google has acquired property on both sides of a segment of the Sunnyvale West Channel upstream of Caribbean Drive. Google is proposing a design change along approximately 1,100 linear feet of the Sunnyvale West Channel as part of its proposed site development for the Google Caribbean Campus Project. This Google project creates on-site and in-kind mitigation opportunities by constructing a wider channel with larger setback levees without floodwalls. The Google project would enhance public access and possibly accelerate receipt of regulatory permits while maintaining Valley Water's project objectives. Valley Water's project is delayed due to the additional time needed to incorporate potential design changes as a result of the Google MOU, determination of the amount of excess mitigation available for Valley Water's use, and continuing negotiations with the various regulatory agencies.
- In December 2020, an amendment to a cost-sharing agreement between Valley Water and the City of Sunnyvale for the construction of recreational trails was finalized, extending an original 2016 cost-sharing agreement to December 2025. This extension accommodates the delayed construction timeline for the project. A related and preceding Joint Use Agreement (JUA) between Valley Water and the City of Sunnyvale for recreational trail use and maintenance remains in place, as enacted in 2016 for a term of 25 years (until the year 2041).

Financial Information

In FY21, 4% of the annual project budget was expended.

Financial Summary ($ Thousands)
Sunnyvale East & West Channels Flood Protection

Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$2,033	$16,085	$0	$18,118	$811	$0	$811	4%	$60,444	17%

The project was underspent due to a delay of the start of construction and FY21 funding attributed to construction not being utilized. The delay in the start of construction is due to finalizing discussions with Google regarding their Caribbean Campus Project, determining suitable and appropriate project mitigation to address comments by the various Resource agencies, completing ongoing negotiations with the various Resource Agencies to secure permits, and incorporating various design changes as a result of securing permits.

Opportunities and Challenges

Schedule adjustment

With the passage of the FY2022-26 Capital Improvement Program, the Board approved a schedule adjustment for this project, pushing the construction to begin in FY22 instead of FY21, and be completed in FY26 instead of FY24. The construction schedule has been adjusted to account for continued discussions with Google regarding their Caribbean Campus Project, which will enhance approximately 1,100 linear feet of the Sunnyvale West Channel and generate on-site mitigation for use by Valley Water. Valley Water has completed the design and continues efforts to acquire the various regulatory agency permits required for construction. The City of Sunnyvale certified the Final Environmental Impact Report (FEIR) for Google's Caribbean Campus Project in May 2020. Subsequent to Google's receipt of regulatory permits, negotiations need to take place with the various regulatory agencies to secure the required project permits. These activities are expected to be finalized by mid FY22 (December 2021), which would allow project construction to begin in late FY22.

Confidence Levels

Schedule: Moderate confidence

Valley Water continues to work on acquiring the temporary rights-of-way acquisitions needed for construction and executing the necessary relocation agreements with the various utility owners. These activities are expected to be finalized in FY22, which would allow project construction to begin in FY22. The design is 100% complete, with the exception of incorporation of the pending permit conditions into the construction documents.

Permanent rights-of-way required for the project have been acquired.

Sunnyvale East Channel

The most significant schedule challenge is the phased construction timeline to replace the existing Caribbean Drive Bridge with a new triple-reinforced concrete box (RCB) culvert and relocate existing utility crossings on the bridge. The Caribbean Bridge currently conveys multiple utilities, including 12-inch water and reclaimed water lines, multiple AT&T fiber-optic lines and PG&E power lines. Coordination with AT&T and PG&E to relocate fiber-optic lines and temporary relocation of power lines is ongoing and expected to be finalized before construction begins. Valley Water had previously requested the City of Sunnyvale to consider allowing a complete closure of Caribbean Drive to avoid a two-year construction window, expensive detours, lane closure, public safety and other concerns that are involved with a partial closure. The City of Sunnyvale elected to require Valley Water to phase the construction with a partial closure of Caribbean Drive, thus requiring a two-year construction window.

Sunnyvale West Channel

The most significant schedule challenge is the coordination of the Carl Road RCB culvert construction with the City of Sunnyvale Water Pollution Control Plant (WPCP). Carl Road crossing serves as the only access to portions of

the WPCP outlet pond facilities and the west landfill. In addition, vital landfill gas extraction lines and city sanitary sewer vitrified clay pipe (VCP) mains cross the existing Carl Road culvert and are required to remain in service 24 hours/7 days a week. To minimize the risk of damaging the two existing VCP sewer lines during the construction of the RCB, the sewer lines will be replaced with a single 36-inch sewer line.

In addition, Valley Water continues to work and coordinate with Google on a proposed enhancement effort along 1,100 linear feet of the Sunnyvale West Channel as part of the proposed site development of Google's Caribbean Campus Project. The City of Sunnyvale, as the CEQA lead agency, certified the FEIR for Google's Caribbean Campus Project in May 2020. Valley Water and Google continue to work on an Authorization Agreement (cost-sharing agreement) for Valley Water Board approval for this enhancement project along the West Channel.

Also, Valley Water and the City of Sunnyvale are partnering for a cost-sharing agreement for a shared portion of a perimeter wall (floodwall/security) around the city's wastewater Water Pollution Control Plant, located along the Sunnyvale West Channel. The shared portion of the wall would act as a floodwall and security wall for the Water Pollution Control Plant. This shared portion of the wall would be constructed by the City of Sunnyvale, with a design review by Valley Water. The city is currently working on finalizing the design for the shared portion of the perimeter wall and estimates construction to begin in 2023.

These partnerships between Valley Water and the city and Valley Water and Google described above will result in minor Project changes that will require Valley Water staff to prepare an EIR addendum, which is currently underway.

Funding (combined): High confidence

This project is fully funded by the Safe, Clean Water Program. The potential Valley Water/Google cost-sharing agreement will have Valley Water agree to contribute to the Google project the estimated amount Valley Water would have spent to construct that reach, including the costs associated with acquiring mitigation, if Google had not proposed their project. Therefore, the Valley Water/Google cost-sharing would result in no additional construction costs for the Valley Water project.

Also, Valley Water is working with the City of Sunnyvale to finalize the terms of a cost-sharing agreement for the shared portion of the new perimeter wall around the city's Water Pollution Control Plant. Similar to the Google cost -share agreement, the upcoming cost-share agreement between Valley Water and the city would only include the cost that Valley Water would have spent to construct the Valley Water design for the shared length of the wall.

Permits (combined): Moderate confidence

The most significant overall challenge to the project is securing the necessary regulatory agency permits in a timely manner to proceed with construction. Valley Water submitted all the required permit applications in June 2017 to the various state and federal regulatory agencies and is currently in negotiations with these agencies to acquire the necessary permits. Google has submitted their required permit applications to the required resource and regulatory agencies for the enhancement of their portion of the West Channel.

There is an ongoing discussion with the regulatory agencies regarding the nature and origin of the Sunnyvale East and West Channels. The channels are storm drain systems constructed by Valley Water in the 1950s and 1960s. Both channels have no naturally occurring headwaters, resulting in extremely limited existing channel vegetation;

the project's environmental impacts are expected to be minimal. Valley Water's recent discussions with the San Francisco Bay Regional Water Quality Control Board (RWQCB) indicate there are some significant differences of opinion regarding the existing beneficial uses and overall project impacts of Sunnyvale East and West Channels. Valley Water is actively working with the RWQCB to attempt to resolve these differences and reduce the project impacts to the extent possible.

Upon receipt of the various regulatory agency permits, permit conditions and requirements will be incorporated into the Final Construction Documents before the project can be advertised for construction.

Jurisdictional Complexity (combined): High confidence

The entire project is within the limits of the City of Sunnyvale. Valley Water has coordinated the planning and design efforts by forwarding to the city the 30%, 60%, 90% and 100% design submittals for review and comment. Valley Water has worked with the city to purchase the necessary project rights-of-way, including temporary staging areas. Valley Water and the city have also executed a cost-sharing agreement for the construction of public trails as part of the project and have executed a Joint Use Trail Agreement. Google and Valley Water continue to work together on the coordination of this project as well as several other Google-Valley Water projects by meeting monthly to address and coordinate the planning, design, and construction of these projects.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Construction of short-term improvements at the Rock Springs neighborhood.

ON TARGET

Project FY21 Highlights

- Approximately 40% of the Coyote Creek Flood Protection Project (CCFPP) became the newly created Coyote Creek Flood Management Measures Project (CCFMMP) being funded by the Water Utility Enterprise. CCFMMP is necessary as avoidance and minimization measures for the Anderson Dam Tunnel Project (ADTP).
- Began design phase of both the CCFPP and CCFMMP.
- Began outreach to property owners adjacent to the creek/project to obtain Permission to Enter documents necessary for design.

Coyote Creek Flood Protection

Montague Expressway to Tully Road – San José

The project is located in the central portion of the Coyote Watershed and extends approximately 9 miles between Montague Expressway and Tully Road in San José.

Preferred project: A federal-state-local partnership

The primary project objective is to reduce the risk of flooding to homes, schools, businesses, and highways in the Coyote Creek floodplain for floods up to the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, and includes planning, design, and project construction. Alternative funding sources, including federal funding, state grants, and additional local funding sources, are being explored and will need to be secured for full construction of the project.

Local funding only project:

The local funding only option includes identifying short-term flood relief solutions that are permittable and do not exacerbate flooding elsewhere, with implementation to begin prior to the 2017-2018 winter season. In addition, under the local funding only option, Valley Water will complete the planning and design phases of the preferred project, and identify prioritized elements of the project for construction with the remaining local funds.

Flooding History and Project Background

Flooding has occurred many times within the Coyote Creek Watershed, including along portions of Coyote Creek in 1911, 1917, 1931, 1958, 1969, 1982, 1983, 1997, 1998, and 2017. The largest flow recorded on Coyote Creek was 25,000 cubic feet per second in 1911, prior to construction of the current 2 water-supply reservoirs in the upper watershed. The worst flooding in the project reach since Anderson Reservoir was constructed in 1950, occurred in February 2017. Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road. Businesses and hundreds of homes were inundated by creek waters for many hours. Highway 101 near Watson Park and various local streets were closed due to flooding, and thousands of residents had to be evacuated and sheltered.

The Coyote Creek Project is located in the central portion of the Coyote Watershed on the mainstem of Coyote Creek, within the City of San José. The original project reach extended approximately 6.1 miles between Montague Expressway and Highway 280; however, the project reach was extended approximately 2.9 miles upstream to Tully Road in 2017 to include the Rock Springs neighborhood and incorporate the areas impacted by the February 21, 2017 flood event. In addition to the primary objective of reducing the risk of flooding to homes, schools, businesses, and highways from Coyote Creek flood events, the project may evaluate opportunities to improve fisheries, stream habitat values, and public access.

Benefits

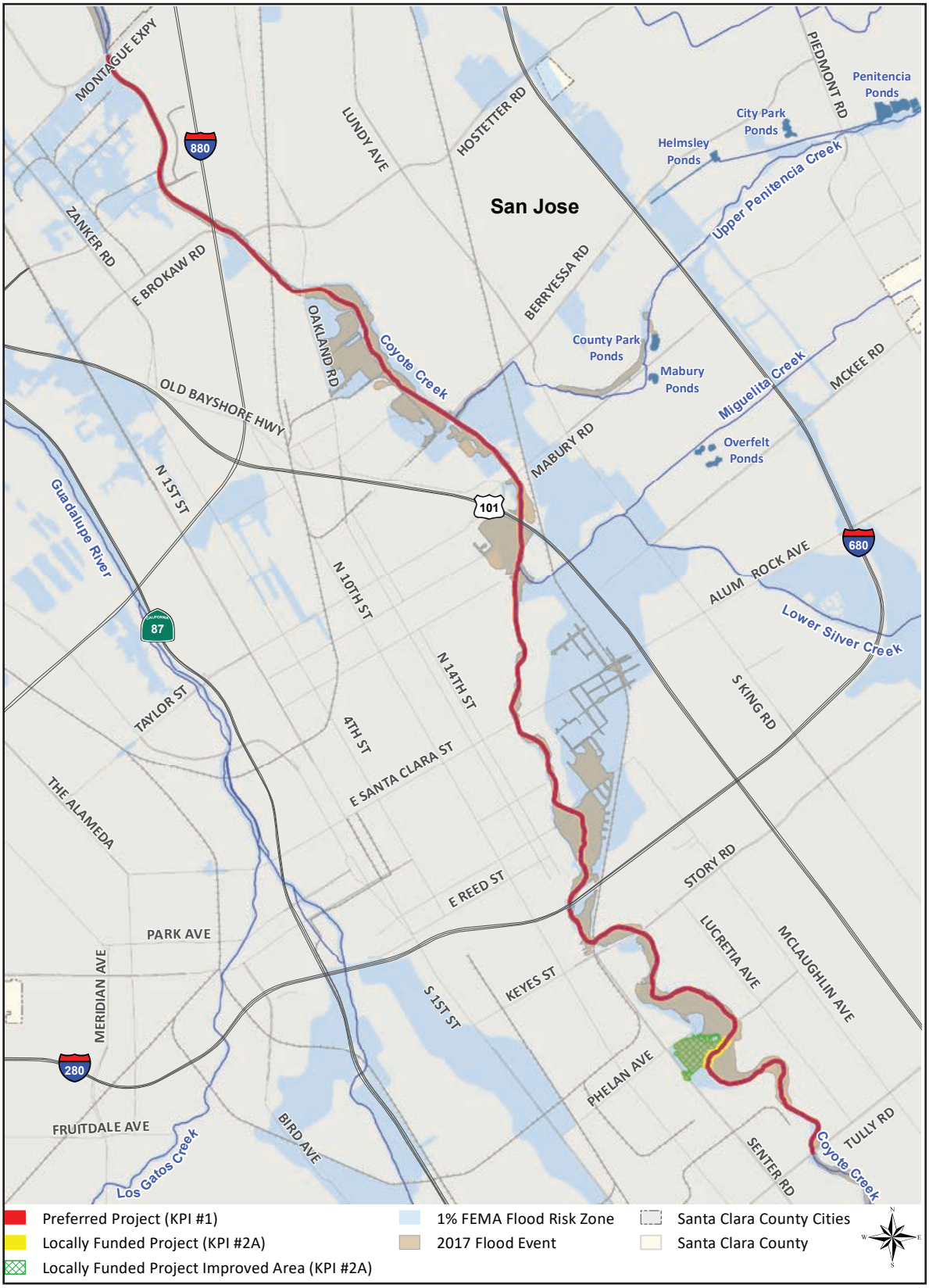
- Implements short-term flood relief solutions
- Provides flood risk reduction for approximately 1,000 parcels from the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, when the entire project from Montague Expressway to Tully Road is constructed
- Improves water quality, enhances stream habitat and provides for recreational opportunities
- Incorporates revegetation and aesthetic elements of the Coyote Creek park chain in the project

Key Performance Indicators [5-year Implementation Plan (FY19-23)]

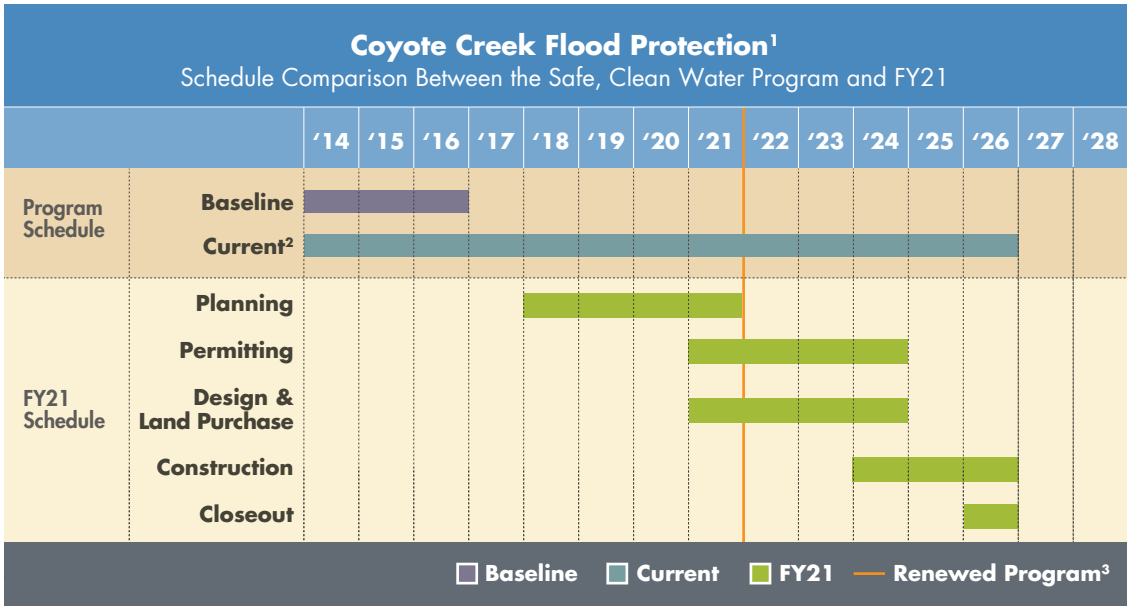
1. Preferred project with federal, state, and local funding: Secure alternative funding sources to construct a flood protection project that provides flood risk reduction from floods up to the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, between Montague Expressway and Tully Road.
2. With local funding only: (a) Identify short-term flood relief solutions and begin implementation prior to the 2017-2018 winter season; (b) Complete the planning and design phases of the preferred project; and (c) With any remaining funds, identify and construct prioritized elements of the preferred project.

Geographic Area of Benefit: San José

Project Location



Schedule



[1] 40% of the project is being constructed as part of the FERC-ordered compliance project for Anderson Reservoir and Dam and, therefore, the schedule for those elements is shown under the Project C1: Anderson Seismic Retrofit.
[2] Board approved a schedule adjustment through the change control process in FY16 & FY20.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	NOT ON TARGET
FY 16	ADJUSTED
FY 17	MODIFIED
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ADJUSTED

Status for FY21: ON TARGET

Progress on KPI #1 & #2:

- The Federal Energy Regulatory Commission (FERC) has jurisdiction over Anderson Dam, located on Coyote Creek in Morgan Hill. In February 2020, FERC directed Valley Water to immediately implement risk reduction measures to protect the public from the risk of Anderson Dam failure due to seismic activity and develop and implement necessary avoidance, minimization and mitigation measures. In compliance with the FERC order, Valley Water took several actions, including the construction of the Anderson Dam Tunnel Project (ADTP), an element of a part of the Anderson Dam Seismic Retrofit Project.
- Approximately 40% of the Coyote Creek Flood Protection Project (CCFPP) is necessary to be designed and constructed as avoidance and minimization measures in anticipation of the construction of the ADTP. The tunnel project is scheduled to be completed in December 2023 and these measures are required to prevent flooding within the urbanized areas of San José as a result of water releases from the new tunnel. Therefore, Valley Water created the Coyote Creek Flood Management Measures Project (CCFMMP), which is now being funded by Water Utility Enterprise Fund (Fund 61).
- The remaining approximately 60% of the CCFPP continues to be designed and constructed and funded by the Safe, Clean Water Program.
- In FY21, Valley Water began the design phase of both the CCFPP and CCFMMP. The effort included hiring a consultant to design the CCFPP and the CCFMMP.
- In the spring of 2021, Valley Water also began the outreach efforts with the property owners adjacent to the creek and the project elements to obtain the required Permission To Enter documents necessary to allow collecting the initial project data needed for design.

Financial Information

In FY21, 25% of the annual project budget was expended.

A significant part of the staff effort was focused on the CCFMMP, which was funded by Water Utility Enterprise Fund (Fund 61).

Financial Summary ($ Thousands)
Coyote Creek Flood Protection Study and Partial Construction

Fiscal Year 2020–2021								15-year Program	
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total			
$2,199	$802	$0	$3,002	$820	$900	$1,720	57%	$56,091	10%

Opportunities and Challenges

Some Coyote Creek Flood Protection Measures expedited as part of FERC Order Compliance Project for Anderson Reservoir and Dam

FERC has jurisdiction over Anderson Dam, located on Coyote Creek in Morgan Hill, and its associated safety measures. In February 2020, FERC ordered Valley Water to immediately implement risk reduction measures to protect the public from the risk of Anderson Dam failure due to seismic activity, and develop and implement necessary avoidance, minimization and mitigation measures. Anderson Dam is situated on Coyote Creek and creates the Anderson Reservoir. In compliance with the FERC Order, Valley Water took several steps, including proposing a project described in the Anderson Dam Federal Energy Regulatory Commission Order Compliance Project (FOCP) Engineer's Report. On June 23, 2020, following a public hearing, the Board approved the Engineer's Report, which is available on Valley Water's website: ***https://www.valleywater.org/project-updates/public-review-documents***. The proposed project would:

1. allow Valley Water a way to safely, reliably and expeditiously drawdown Anderson Reservoir (Reservoir) and help to maintain the Reservoir at a required lower elevation;
2. minimize risks associated with exceeding the restricted Reservoir level with the existing outlet structure by constructing a new, low-level outlet;
3. prioritize the interim downstream protection of certain residents and property; and
4. minimize the public health and safety and environmental impacts of the Reservoir drawdown.

Valley Water has identified areas within Coyote Creek to reduce flood risk as a result of implementing the FOCP, namely from the operation of the FERC Ordered expedited construction of the Anderson Dam Tunnel Project new low-level outlet. As a result, the FOCP includes the construction of some elements of the Coyote Creek flood protection measures (item 3 above) as avoidance and minimization measures to reduce flood risk within certain urbanized areas of Coyote Creek.

Consequently, some (approximately 40%) of the CCFPP elements are being expedited as part of the FOCP. These measures constitute the CCFMMP and consist of acquisition or elevation of up to 10 structures on nine (9) parcels and construction of up to six (6) spans of off-stream floodwalls or levees to reduce flood risks arising from higher maximum Anderson Dam low-level outlet flows, flows from the existing outlet, and Coyote Creek inflows resulting from storm events. The FOCP Coyote Creek Flood Management Measures must be constructed by the end of 2023, or the same time as the Anderson Dam low-level outlet construction is completed, to prevent flooding within urbanized areas of San José as a result of the water releases from the tunnel. These measures will be implemented along Mid-Coyote Creek in San José, between Highway 280 and Oakland Road.

The remaining elements of the CCFPP (approximately 60%) will be known as the non-FOCP flood management elements and will cover the construction of flood protection elements necessary to handle similar flows as the 2017 flood event. The non-FOCP flood management elements will need to be constructed by fall 2025, the same time as the completion of the Anderson Dam high-level outlet.

Funding Opportunities

There are many funding opportunities that are being evaluated for the Coyote Creek project. Alternative funding sources, including federal funding, state grants and additional local funding sources, are being explored and may need to be secured for full construction of the project. For this project, Valley Water will also seek a low-cost federal loan under the Water Infrastructure Finance and Innovation Act of 2014.

Construction Schedule Challenge

An important challenge is that the CCFPP needs to be implemented by fall 2025, the same time as the completion of the Anderson Dam high-level outlet. This allows approximately four years for the project to be designed and constructed, which is an ambitious target for a large and complicated project.

Partnership with USACE

In August 2019, Valley Water and the USACE agreed on an initial task under the Section 1126 MOA developed in 2018. This initial task was for the USACE to produce a project management plan (PMP) that provided a comprehensive description of how the USACE would go about producing a Feasibility Study to USACE standards. In May 2020, the USACE delivered a draft PMP to Valley Water. In March 2021, the PMP was finalized and the task was completed. This effort was to explore Valley Water conducting a USACE-style feasibility study for a higher level of flood protection from the level of flooding that occurred on February 21, 2017, approximately a 20 to 25-year flood event (a flood event that has 4% to 5% chance of occurring in any given year).

Confidence Levels

Schedule: Moderate confidence

Based on the expedited adjusted schedule with a target completion date of FY26, Valley Water should be able to complete the local funding only option (KPI #2) given successful permitting.

Funding: Moderate confidence

Initially, the Safe, Clean Water Program fully funded the "local funding only" project's planning and design phases and the identification of prioritized elements of the project for construction. Following the Board's decision in 2019 to fund the preferred project with local dollars, the project has been provided additional funding. However, completion of the project may require further additional funding. Valley Water continues to explore alternative funding sources, including federal funding, state grants and other local funding sources.

Permits: Moderate confidence

The preferred project has been designed to minimally impact creek resources, with almost all elements outside the creek banks. By minimizing in channel work and its impacts, the permit application and acquisition process should be able to proceed more expeditiously.

Jurisdictional Complexity: High confidence

All local agencies, the City of San José and the County of Santa Clara, are fully cooperating due to the significant need for the project.

See *Appendix D: Capital Projects Jurisdictional Complexities* for a list of confidence levels for each project by outside agency for funding, regulatory permitting, cities, counties and other agencies.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Completed Projects

Project A1
Main Avenue and Madrone Pipelines Restoration

Project D2
Revitalize Stream, Upland and Wetland Habitat

Project D7
Partnerships for the Conservation of Habitat Lands

Permanente Creek Flood Protection
San Francisco Bay to Foothill Expressway – Mountain View

Berryessa Creek Flood Protection
Calaveras Boulevard to Interstate 680 – Milpitas and San José

Calabazas Creek Flood Protection
Miller Avenue to Wardell Road

Clean, Safe Creeks Grants Projects

Main Ave. pipeline installation.

COMPLETED

Project A1 FY20 Highlights

- Restored the transmission pipeline from Anderson Reservoir to full operating capacity of 37 cfs in June 2019.
- Restored the transmission pipeline to deliver 20 cfs to Madrone Channel in January 2019.

Project A1

Main Avenue and Madrone Pipelines Restoration

This project will restore the Main Avenue and Madrone pipelines to full operating capacity of conveying 10 cubic feet per second (cfs) and 27 cfs, respectively, for a total of 37 cfs from Anderson Reservoir or the Santa Clara Conduit for groundwater recharge via the Main Avenue Recharge Ponds and the Madrone Channel. The project will plan, design, and construct approximately 14,000 linear feet or 2.6 miles of 30-inch to 36-inch diameter pipeline and associated appurtenances.

Benefits

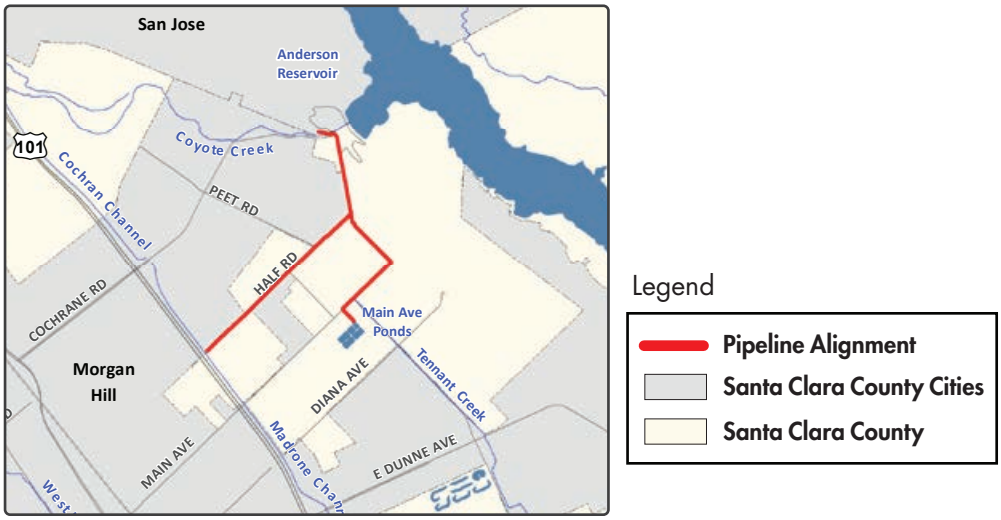
- Increases groundwater recharge by about 2,000 acre-feet per year in South County's Llagas Groundwater Sub-basin, a sufficient water supply for 4,000 families of 5
- Improves operational flexibility
- Maximizes the delivery of imported water to treatment plants supplying drinking water to North County
- Saves energy, reduces operating costs, and cuts CO_2 emissions by reducing dependence on Coyote Pumping Plant

Key Performance Indicators (15-year Program)

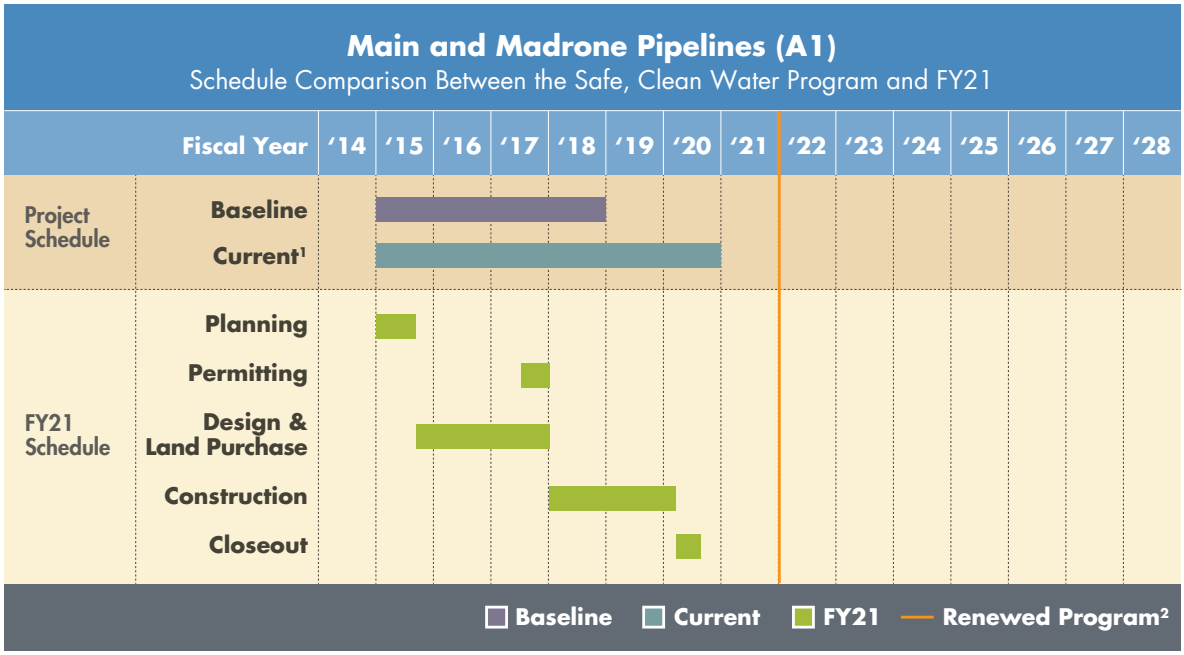
1. Restore transmission pipeline to full operating capacity of 37 cfs from Anderson Reservoir.
2. Restore ability to deliver 20 cfs to Madrone Channel.

Geographic Area of Benefit: Countywide

Project Location



Schedule



[1] Board approved schedule adjustments through the change control process in FY16 & FY19.

Status History

Fiscal Year	Status
FY 14	SCHEDULED TO START
FY 15	ON TARGET
FY 16	ADJUSTED
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	COMPLETED

Status for FY20: COMPLETED

Financial Information

Financial Summary ($ Thousands)
A1. Main Avenue and Madrone Pipelines Restoration

Fiscal Year 2020–2021								15-year Program		
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Bduget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total				
$0	$225	$0	$225	$13	$0	$13	6%	$8,303	$17,570[1]	98%

[1] Cost of the project is $17.6 million. The Water Utility fund pays $11.4 million via transfer; net cost to Safe, Clean Water Program is $6.2 million.

Project D2

Revitalize Stream, Upland and Wetland Habitat

This project allows Valley Water to remove non-native, invasive plants and revegetate habitat with native species when needed. Funding also restores degraded habitat between revegetated sites to create a more contiguous habitat corridor for wildlife. This project includes targeted control of especially damaging non-native, invasive plant species such as *Arundo donax*, and education for nearby landowners and other stakeholder groups on the control of harmful species. This project also helps implement the Stream Corridor Priority Plans developed in Project D3.

Volunteers remove invasive periwinkle at Bear Creek Redwoods Open Space Preserve.

COMPLETED

Project D2 FY21 Highlights

- Along with partners, removed approximately 7.7 acres of invasive and non-native vegetation stands in FY21.
- With partners, removed a total of approximately 87 acres of invasive and non-native vegetation stands from FY14 to FY21.

Benefits

- Increases viability of native riparian species by reducing competition from non-native, invasive species
- Improves habitat by installing tidal and riparian plant species
- Improves ecological function of existing riparian and wetland habitats to support more diverse wildlife species
- Improves patchy wildlife corridors by increasing connectivity of habitat
- Increases community awareness about the damaging impact that non-native, invasive plants have on local ecosystems

Key Performance Indicators (15-year Program)

1. Revitalize at least 21 acres, guided by the 5 Stream Corridor Priority Plans, through native plant revegetation and removal of invasive exotic species.
2. Provide funding for revitalization of at least 7 of 21 acres through community partnerships.
3. Develop at least 2 plant palettes for use on revegetation projects to support birds and other wildlife.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	ON TARGET

Status for FY21: COMPLETED

Progress on KPI #1 : (Completed in FY21)

Valley Water and its D2 Project partners – the City of San José, California State Coastal Conservancy (Conservancy), and Midpeninsula Regional Open Space District (Midpen) – exceeded the KPIs by removing approximately 87 acres of invasive and non-native vegetation stands (10.7 acres by Valley Water and 76.3 acres in partnerships under KPI #2) through FY21. Successfully controlling invasive vegetation often requires repeated treatments at infested sites over multiple years. This is especially necessary for giant reed (Arundo donax) and invasive cordgrass (Spartina alterniflora) control. For example, giant reed sites on Coyote Creek, initially treated by Valley Water's Stream Maintenance Program (SMP) in FY18 and FY19, continue to be managed by the City of San José for successful habitat revitalization. Of the approximately 3.3 acres of giant reed removal started by Valley Water under SMP along Coyote Creek upstream of Oakland Road, the City of San José cut and treated 0.5 acres in FY21. More work will be conducted at the site, and therefore, the acreage is not counted under KPIs #1 or #2 at this time. The three (3) partnership agreements will extend into the renewed Safe, Clean Water and Natural Flood Protection Program, as described for KPI #2 below. Decreasing the extent of invasive vegetation is an objective of the Coyote Creek Native Ecosystem Enhancement Tool (CCNEET) with opportunity areas based on invasive plant mapping by Valley Water and the City of San José, among other data sources. See Project D3 description for more details.

Maps showing the invasive and non-native vegetation stands controlled, locations and additional information are provided on the Safe, Clean Water webpage under Project D2: ***https://www.valleywater.org/project-updates/d2-revitalize-stream-upland-and-wetland-habitat.***

Table D2.1 summarizes the acres of invasive and non-native plant species removed by the various D2 partners and efforts through FY21, including carryover of a Clean, Safe Creeks and Natural Flood Protection Program grant. Vegetation species controlled are shown on maps found on the Safe, Clean Water webpage under Project D2 (see above). The acres are based on the canopy cover of the target plant species removed.

Progress on KPI #2: (Completed in FY19)

In FY21, Valley Water's partners continued to exceed the KPIs by removing invasive vegetation at approximately 7.7 new acres, bringing the total to date to 76.3 acres through community partnerships. Midpen cleared approximately 7.7 new acres and maintained control on 20.9 acres. The Conservancy continued to aggressively manage the

ongoing infestation of invasive cordgrass and its hybrids in South San Francisco Bay, using D2 funds to spot-treat 5.0 acres of emerging invasive Spartina across over 4,492 acres of tidal wetland in the bay within and adjacent to Santa Clara County.

- City of San José – The city's contractors managed vegetation at the Coyote Creek site east of Oakland Road through December 2020. Careful planning was required due to the presence of camps and the inability to clean them during the COVID-19 pandemic. Work was focused on safe areas at the eastern third of the site, where highly dense stands of Arundo donax existed. Human refuse was removed. Giant reed was treated, cut, and removed. Then, a native seed mix of local genotypes of eight plant species was sown, and erosion control measures were installed. A total of approximately 21,600 square feet (0.5 acres) of Arundo donax was cut and removed and a total of 316 cubic yards of cut and chipped material was off-hauled and disposed. As mentioned, more work is necessary to completely remove giant reed and other non-native vegetation at the 3.3-acre site. The City of San José partnership has just over 40% of its funding remaining for 2021 and 2022, when its 5-year duration ends.

- California State Coastal Conservancy – The Conservancy's invasive Spartina work was successfully implemented in FY21, even with the need for revised plans, adjusted dates, permit amendments due to COVID-19 restrictions, and wildfire smoke in the summer and fall of 2020. The Conservancy retreated 5.0 acres of invasive Spartina within a matrix tidal marsh and ecotone habitats in Valley Water's service area, ensuring that this aggressive invader and ecosystem engineer does not regain a foothold in our sensitive bayland habitats, imperiling endangered species such as the Ridgway's rail.

- Midpeninsula Regional Open Space District (Midpen) – In FY21, this partnership continued its focus on removing invasive and non-native vegetation at the Bear Creek Redwoods Open Space Preserve while expanding efforts to an additional preserve, protecting sensitive upper-watershed species and habitats, and continuing to conduct outreach on native habitat revitalization where possible during the COVID-19 pandemic. In FY21, Midpen removed invasive plants from Bear Creek Redwoods Preserve and expanded efforts into Picchetti Ranch Open Space Preserve. A 1.25-acre patch of Clematis vitalba was treated around a spring near Picchetti Ranch's main parking lot, and a mature Eucalyptus tree and several saplings were removed near the parking lot for a treatment area of 0.04 acres. Follow-up will continue at this site for several years. Midpen treated 7.7 new acres and maintained treatment on 20.9 acres in FY21, bringing the total acreage of invasive plants removed by Midpen over the Safe Clean Water partnership period to 71.3 acres. (see also: ***tinyurl.com/BearCkRedwoods*** and the Midpen map on the D2 webpage ***https://www.valleywater.org/project-updates/d2-revitalize-stream-upland-and-wetland-habitat)***.

- Valley Water continues to work with partners in the Santa Clara County Wildlife Corridors Working Group on restoring habitat connections between the Santa Cruz and Diablo mountain ranges, especially crossing Highway 101, Monterey Road, and Pacheco Pass (State Route 152). Not only does this work benefit wildlife and their genetic integrity, but also reduces vehicle impacts protecting drivers. In FY21, Valley Water provided direct assistance to the working group on the following projects:

- Partnering with Caltrans to clear out numerous US-101 culverts in Coyote Valley with varying degrees of blockage (Valley Transportation Authority, Valley Water, Valley Habitat Agency, Peninsula Open Space Trust, Pathways for Wildlife, and County Parks). For this ongoing effort, Valley Water is providing technical expertise.

- Partnering with Caltrans on a pilot fence realignment project at a US-10 culvert in Coyote Valley at the Safe, Clean Water D2 restoration site (Valley Transportation Authority, Valley Water, Valley Habitat Agency, Peninsula Open Space Trust, and Pathways for Wildlife). For this ongoing effort, Valley Water is providing technical expertise and may provide skilled field staff to construct the fence realignment in FY22.
- Alma Bridge Road Newt Mortality Study (Midpeninsula Regional Open Space, Peninsula Open Space Trust, Valley Water, County Parks, County Roads and Airports, and H.T. Harvey and Associates). For this study, Valley Water provided technical expertise, biologists for field work, an encroachment permit to conduct the study on Valley Water property.

The working group is involved in several other ongoing projects as well with multiple partners, including the following (major partners in parentheses): Coyote Valley Road Ecology Study (Peninsula Open Space Trust, Valley Habitat Agency, and Pathways for Wildlife), Southern Santa Cruz Mountains Wildlife Connectivity Study (Peninsula Open Space Trust and Pathways for Wildlife), Badger and Burrowing Owl Habitat Study (Midpeninsula Regional Open Space, Pathways for Wildlife, and San Francisco Bay Bird Observatory), and the SR-152 Pacheco Creek Wildlife Connectivity and Corridor Enhancement Project (Valley Habitat Agency, Pathways for Wildlife, and H. T. Harvey and Associates).

Table D2.1 Invasive and non-native vegetation removed for D2 FY14–21

Agency / Partner	Location / River / Creek	FY21 Acres	Total Acres
Valley Water	Coyote Valley Lower Guadalupe River Saratoga Creek Stevens Creek		0.5 2.5* 5.5 2.2
	Subtotal		10.7*
California State Coastal Conservancy	South San Francisco Bay in Santa Clara County, Coyote Creek estuary, Faber and Laumeister marshes		5.0*
City of San José	Oakland Road, Coyote Creek	0.5**	0.0**
Midpeninsula Regional Open Space District	Bear Creek Redwoods and Picchetti Ranch Open Space Preserves	7.7	71.3
Total		8.2	87.0*

*2.0 and 4.0 acres completed under Clean, Safe Creeks and Natural Flood Protection grants
**Needs additional vegetation management

Progress on KPI #3: (Completed in FY15)

The two (2) plant palettes required to meet KPI #3 were created in FY15. In FY16, three (3) more palettes were developed, two (2) of which were in response to an IMC recommendation for plants that support birds and other wildlife. With the decline and concern for pollinators, Valley Water added a Santa Clara County native plant palette for bees and butterflies. All five (5) palettes are updated and available on the Project D2 webpage.

Financial Information

In FY21, 95% of the annual project budget was expended.

The COVID-19 pandemic reduced field work and in-person outreach activities, resulting in less spending on D2 than budgeted. While the pandemic did not suspend all work, field work was more difficult to accomplish, and habitats with camps were inaccessible for habitat management.

Financial Summary ($ Thousands) D2. Revitalize Stream, Upland and Wetland Habitat									
Fiscal Year 2020-2021							15-year Program		
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total				
$980	$0	$980	$637	$298	$935	95%	$18,190	$15,190	31%

Opportunities and Challenges

Early Detection and Rapid Response (EDRR)

The California Invasive Plant Council (Cal-IPC) and Calflora are improving their statewide invasive plant detection and mapping systems. Valley Water, Midpen, and resource agencies are using Calflora more extensively. CalWeedMapper, WHIPPET and Calflora are now integrated and available to the public, including access via a cell phone application. Cal-IPC and Valley Water encourage land managers to submit their invasive plant management records once a year and early-detection observations immediately. Valley Water is maintaining a list of high-priority emerging invasive weeds not yet present in the county but present in neighboring counties or known to be particularly damaging in wildlands, as a preliminary step in developing a comprehensive EDRR program that would allow periodic surveying and treatment of new high-impact infestations. We continue to convene the Santa Clara Weed Management Area (SCWMA) working group meeting bimonthly, though virtually since March 2020, hosting conversations about emerging weed concerns, treatment options, regional eradication priorities, and collaboration opportunities among members from Santa Clara County Parks, California State Parks, County of Santa Clara Division of Agriculture, Caltrans, and other area partners. When the renewed Safe, Clean Water and Natural Flood Protection Program begins in FY22, work will intensify on formalizing and permitting a Valley Water EDRR program.

COVID-19 Pandemic Impacts

The County of Santa Clara Public Health and Governor of California shelter-in-place orders temporarily stopped D2 field work at the end of FY20 and slowed work through FY21. Encampments in areas where invasive vegetation control was desired could not be evacuated, thus access for work was not possible. Restrictive procedures developed for conducting field work to protect people from infection were less efficient with social distancing, common vehicles, equipment disinfection, and personal protective equipment is uncomfortable, especially in hot weather. Partners such as MidPen delayed field work and community volunteer events. However, creative problem solving allowed much work to continue with the implementation of new protocols and practices, with the end result that by the end of FY21, both California Coastal Conservancy and Midpen were able to fulfill most or all of their planned field work using updated COVID-19 protocols.

Education and Outreach

Valley Water participates in scientific conferences and works with resource agencies and partners, particularly Midpen, Coastal Conservancy, City of San José, SCWMA, Calflora and Cal-IPC. Valley Water's Invasive Plant Management Plan (IPMP) under SMP was approved by Federal, State and regional resource agencies, and is known by some local conservation organizations and members of the public. The D2 partnership with Midpen is important for increasing public awareness and education. Midpen normally organizes and participates in community and children-oriented events, docent-led activities, outdoor service projects, nature hikes and field tours, posts educational trail signs, operates a nature center and farm. Due to COVID-19, large group service-learning events and most volunteer events were canceled. However, in the later part of the fiscal year, smaller group events and events with trained and protected volunteers were able to begin again. Through their programs with Grassroots Ecology, the Preserve Partners program, and Advanced Resource Management Stewards Projects, MidPen was able to continue their volunteer field work with a total of 191 volunteers and 918 hours in FY21. More D2 outreach could be done with schools, conservation groups, municipal park and landscape agencies. Internet sites are increasingly valuable with more in-home, distance and virtual learning. Online resources and mobile applications continue to expand on the subjects of native plant and wildlife gardening, landscaping, and plants for pollinators. Several links on these and other related subjects are available on the D2 webpage.

Water Molds (*Phytophthora* spp.) and Drought

Water molds, such as sudden oak death, and other Phytophthora species continue to infest Santa Clara County and California. Other plant pathogens exist and there have been recently reported vegetation die-offs in the State and region. Valley Water, Midpen, and others continue to study, plan, and experiment with remediating sites infested by water molds (Phytophthora spp.). Infection by Phytophthora species can lead to root rot, which induces drought-like symptoms from reduced water uptake, and ultimately plant death may occur. Infected plants may not show any initial signs of the disease or stress. Water molds are a complex challenge to restoring native habitats, especially combined with other stressors, the aggressive nature and abundance of invasive plants, water supply with drought and climate change, disturbed site conditions and other plant pathogens. Improper irrigation techniques can exacerbate water mold impacts. Plant nurseries have implemented procedures to prevent Phytophthora infestations, planting techniques and best management practices to control the spread of plant pathogens. For more information, see the Working Group for Phytophthoras in Native Habitats (Calphytos). Collaborative efforts must continue to better understand and reduce the spread of water molds and all plant pathogens. The Project D2 webpage has several links about water molds (see ***https://www.valleywater.org/project-updates/d2-revitalize-stream-upland-and-wetland-habitat***.)

Santa Clara County was in drought conditions through most of FY21, beginning abnormally dry in July, progressing to moderate drought in August through November, and extreme drought in May. The frequency and severity of droughts appear to be increasing, as they have been since 2000 in Santa Clara County. Drought conditions increase wildfires, as dramatically witnessed on both sides of the county in FY21, as well as the need for irrigation, pathogen and weed management at newly planted native habitat restoration sites. These challenges increase the cost and labor requirements for site maintenance. Drought also challenges the long-term sustainability of native habitats existing today, decreasing their resilience to the stresses of climate change, habitat loss, invasive species, fire and other factors.

Graph D2.1 summarizes the amount of invasive and non-native vegetation removed and maintained by Valley Water, and its D2 partners each fiscal year. Maintained acres are where initial invasive and non-native plant removals required follow-up controls to be effective.

Graph D2.1 Acres of Invasive and Non-native Vegetation Control by Fiscal Year

[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

* The amount of acres in FY19 has been corrected.

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

Project D7

Partnerships for the Conservation of Habitat Lands

Funding from this project helps the community acquire important habitat land to preserve local ecosystems. The project supports implementation of the Valley Habitat Plan, a multi-agency agreement that pools mitigation dollars to purchase large areas of habitat land for conservation.

Coyote ceanothus plant

COMPLETED

Project D7 FY20 Highlights

- Provided $8 million to fund the acquisition of property for the conservation of the endangered Coyote ceanothus.
- This project was completed in FY20.

Benefits

- Fulfills a portion of Valley Water's acre allocation to the Valley Habitat Plan
- Protects, enhances and restores natural resources in Santa Clara County
- Contributes to the recovery of special status species
- Coordinates regional mitigation projects to create larger, less fragmented conservation lands that are more beneficial for wildlife and the environment
- Provides for endangered species and wetlands mitigation for future water supply and flood protection projects

Key Performance Indicator (15-year Program)

1. Provide up to $8 million for the acquisition of property for the conservation of habitat lands.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ON TARGET
FY 20	COMPLETED

Status for FY21: COMPLETED

A partnership agreement (***www.valleywater.org/Agreement4208SCVHA***) with the Santa Clara Valley Habitat Agency (VHA) was fully executed in January 2019, which established criteria for the allocation of partnership funding for the conservation of habitat lands. The VHA evaluated Valley Habitat Plan conservation objectives and identified a high-priority land acquisition that met the established

criteria. Acquisition of the property preserved a population of the endangered Coyote ceanothus, providing necessary mitigation for impacts to this species resulting from the Anderson Dam Seismic Retrofit Project. In FY20 Valley Water provided $8 million to VHA to acquire the property, thus completing the project. The property will be enrolled into the VHA reserve system and managed in perpetuity to maintain its conservation values and preserve this endangered plant species. A copy of the agreement with VHA can be found on the D7 webpage: ***https://www.valleywater.org/project-updates/2012-d7-partnerships-conservation-habitat-lands.***

Financial Information

Financial Summary ($ Thousands)
D7. Partnership for the Conservation of Habitat Lands

Fiscal Year 2020–2021							15-year Program		
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total				
$0	$0	$0	$1	$0	$1	0%	$10,524	$10,524	76%

2012 Safe, Clean Water Program replaced by the renewed Safe, Clean Water Program on July 1, 2021

In November 2020, county voters approved the renewal of the Safe, Clean Water and Natural Flood Protection Program approved in 2012. On July 1, 2021, the renewed Safe, Clean Water Program replaced the 2012 program in its entirety. While almost all the active projects were carried into the renewed Safe, Clean Water Program, some of the project KPIs and schedules were realigned. This project is included in the renewed Safe, Clean Water Program. For details on the renewed Safe, Clean Water Program, its project KPIs and schedules, visit ***www.valleywater.org/safe-clean-water-and-natural-flood-protection-program***.

McKelvey Ballpark and Detention Basin

COMPLETED

Project FY21 Highlights

- Completed project construction with the completiion of the Rancho San Antonio Park Flood Detention Facility.

Permanente Creek Flood Protection

This project will provide flood protection for thousands of homes and businesses in Mountain View and Los Altos, create recreational opportunities and enhance the environment. The project spans 10.6 miles of Permanente Creek, from San Francisco Bay's southwest shoreline through Mountain View to Foothill Expressway in Los Altos. The project uses a natural flood protection approach to prevent potential flooding damages in excess of $48 million (1999 value). The project includes multiple elements: channel improvements; flood detention area and recreational improvements at City of Mountain View's McKelvey Park; and flood detention areas, recreational improvements and enhanced habitat at County of Santa Clara's Rancho San Antonio Park.

Benefits

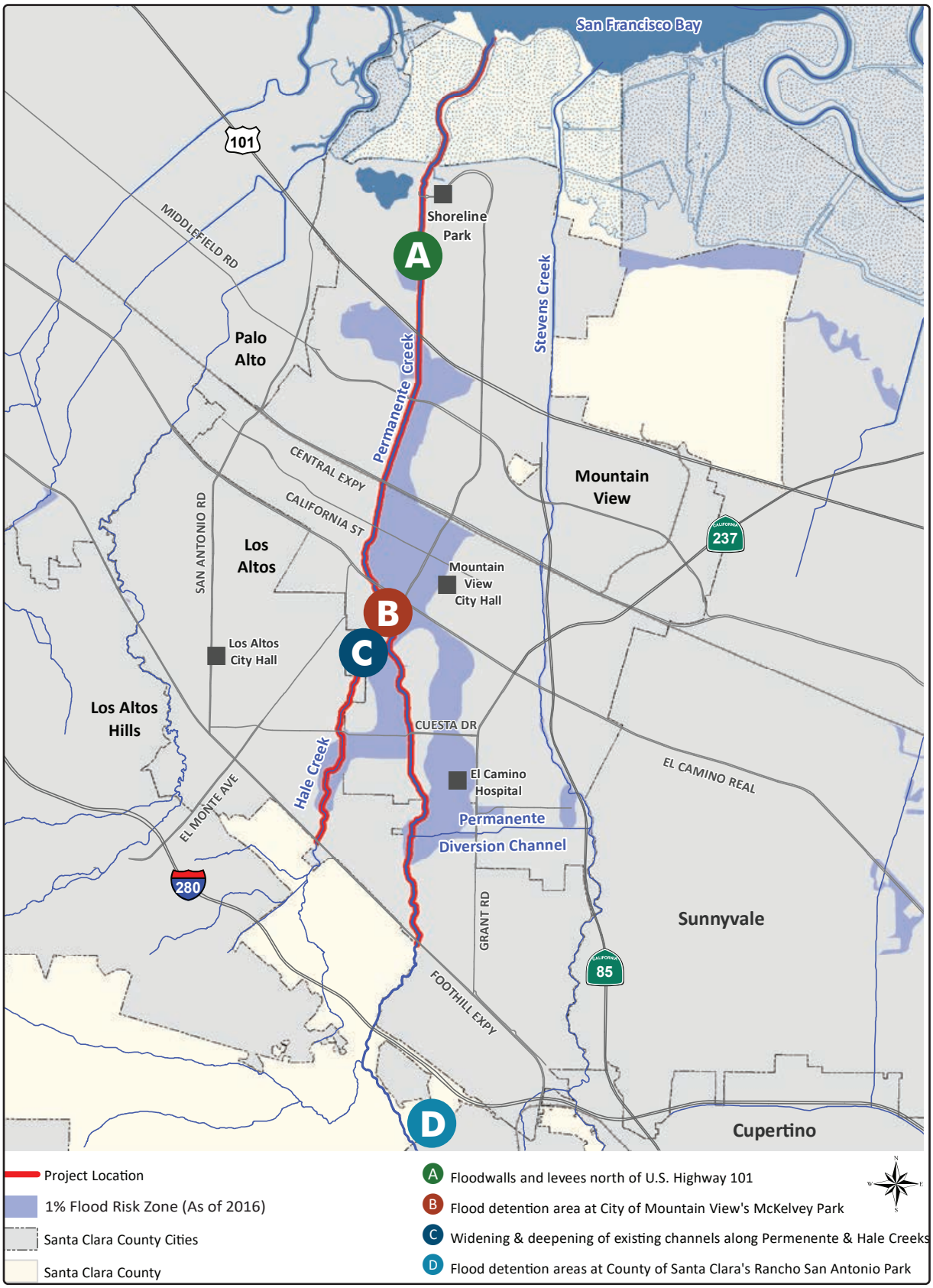
- Provides flood protection to a minimum of 1,664 parcels (1,378 homes, 160 businesses and 4 schools/institutions) downstream of El Camino Real from a 1% (or 100-year) flood
- Prevent flooding of Middlefield Road and Central Expressway
- Minimize the future cost for maintenance
- Provide opportunities for environmental enhancements and trail extension

Key Performance Indicator (5-year Implementation Plan)

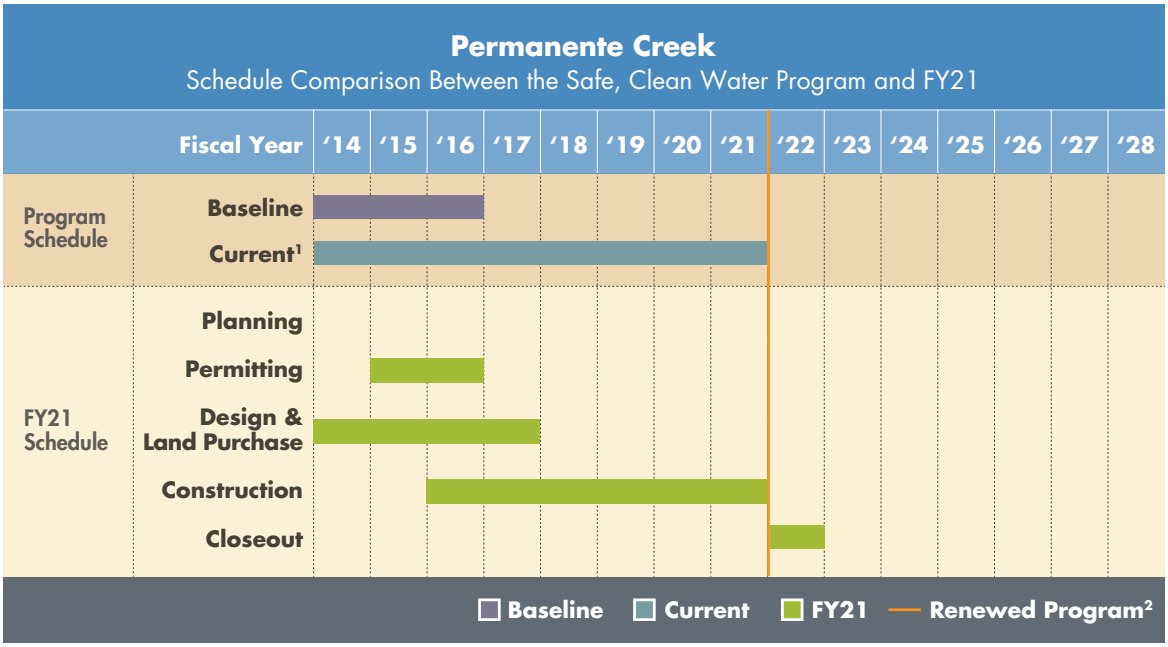
1. Provide flood protection to 1,664 parcels downstream of El Camino Real, including Middlefield Road and Central Expressway.

Geographic Area of Benefit: Mountain View and Los Altos

Project Location



Schedule



[1] Board approved a schedule adjustment through the change control process in FY16, FY19 & FY20.

[2] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program. The project schedule after this point is determined by activities in the renewed program.

Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	ADJUSTED
FY 16	ADJUSTED
FY 17	ON TARGET
FY 18	ON TARGET
FY 19	ADJUSTED
FY 20	ADJUSTED

Status for FY21: COMPLETED

Progress on KPI #1:

- With the completion of the Rancho San Antonio Park Flood Detention Facility in April 2021, Valley Water has completed the KPI of providing flood protection downstream of El Camino Real, including Middlefield Road and Central Expressway. Discovery of a sensitive environmental resource and its recovery had required additional time to complete construction of this project. A final report on the environmental resource will be prepared to close out the USACE permit. Therefore, the project close out is anticipated in FY22.

- McKelvey Park Flood Detention Facility construction was completed in February 2020.
- Channel improvements construction was completed in 2018.

Financial Information

In FY21, 82% of the annual project budget was expended.

During the year, the project budget was increased due to unanticipated costs resulting from the discovery and recovery of a sensitive environmental resource, which delayed construction of the Rancho San Antonio Park Flood Detention Facility. On January 12, 2021, the Board approved a budget adjustment for $3,886,677 to increase the construction contract contingency sum for the Rancho San Antonio Park Flood Detention Facility Project and included additional funds to cover unanticipated labor, services and supplies costs for the overall Permanente Creek Project. The contractor for the Rancho San Antonio Flood Detention Facility construction has submitted a number of claims for additional cost to complete the project. Valley Water staff continues to evaluate the information submitted and negotiate the additional cost with the contractor. Furthermore, the budget adjustment included funds to support a three-year plant establishment period at Rancho San Antonio, especially considering the current drought conditions.

Financial Summary ($ Thousands)
Permanente Creek Flood Protection

Fiscal Year 2020–2021								15-year Program		
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan[1]	% of Plan Spent
				Actual	Encumbrance	Total				
$0	$2,394	$3,887	$6,280	$3,666	$1,454	$5,120	82%	$31,509	$81,706	105%

[1] The FY21 annual report is the final report for the 2012 Safe, Clean Water Program. The 15-Year Adjusted Plan for capital projects is based on the FY2021-25 Five-Year Capital Improvement Program (CIP) and its FY21 implementation. It does not reflect the funding allocations developed as part of the FY2022–26 Five-Year CIP, which marked the start of the renewed Safe, Clean Water that replaced the 2012 Program.

Completed Trestle Bridge along Upper Berryessa Creek.

COMPLETED

Project FY21 Highlights

- Valley Water reconciled the Montague Expressway bridge replacement cost balance with the partner agencies in December 2020.
- In February 2021, Valley Water and the San Francisco Bay Regional Water Quality Control Board settled on the off-site mitigation requirement.
- The USACE completed and submitted to Valley Water the Operations and Maintenance Manual (O&M) in March 2021.
- In FY22, the USACE is planning to complete construction of a few items that were identified as needing correction at the final inspection of the construction, after which Valley Water will finalize the project cost with the USACE.

Berryessa Creek Flood Protection

Calaveras Boulevard to Interstate 680

This project is a partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct flood improvements to protect homes in Milpitas and San José, as well as Silicon Valley's commercial district, from a 1% (100-year) flood flow. The Bay Area Rapid Transit (BART) 10-mile extension project spans from Warm Springs Station in Fremont to the North San José Berryessa area. The new Milpitas Station is underground and is located in the Berryessa Creek floodplain. The Berryessa Creek project's completion is critical to the BART extension's planned operations.

Benefits

- Protects up to 1,662 businesses and homes in Milpitas and San José from a 1% flood, saving potential damages in excess of $527 million
- Provides protection for more than 30 miles of streets including Highway 237 and Montague Expressway

Key Performance Indicators (5-year Implementation Plan)

1. Local and federal funding flood damage reduction for 1,662 parcels, including 1,420 homes, 170 businesses, and 5 schools/institutions.
2. Using local funds only, a reduced project would extend from the confluence with Lower Penitencia upstream to Montague Expressway, modifying 2 miles of channel and protecting approximately 100 parcels.

Geographic Area of Benefit: Milpitas and San José

Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	ON TARGET
FY 16	ADJUSTED
FY 17	ON TARGET
FY 18	COMPLETED
FY 19	COMPLETED
FY 20	COMPLETED

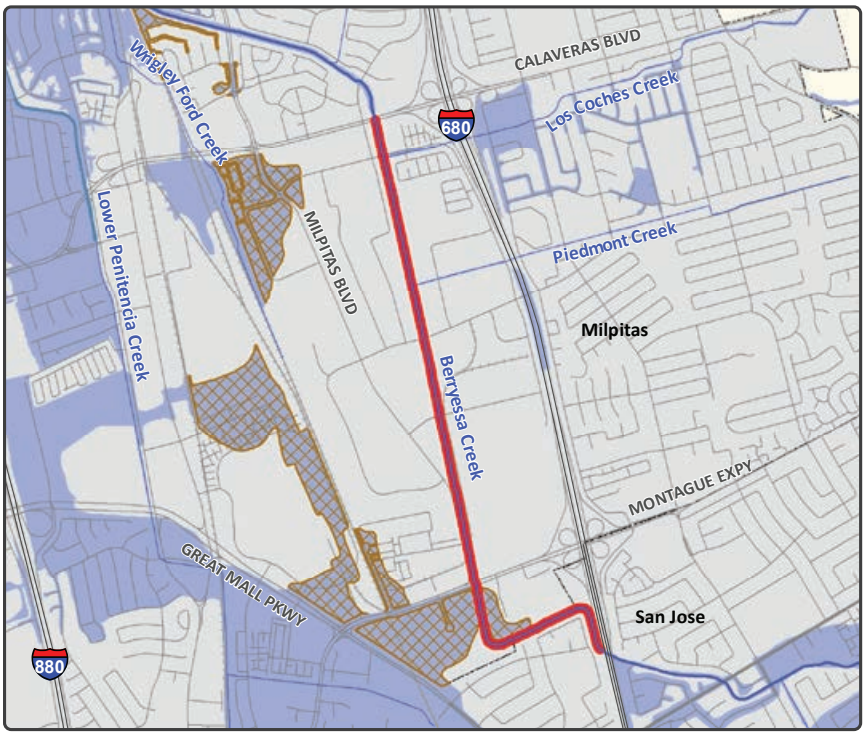
Status for FY21: COMPLETED*

* In FY18, the project KPI was delivered and, therefore, project status is identified as completed. However, in FY21, the USACE had yet to complete final close out of Valley Water's share of design and construction costs.

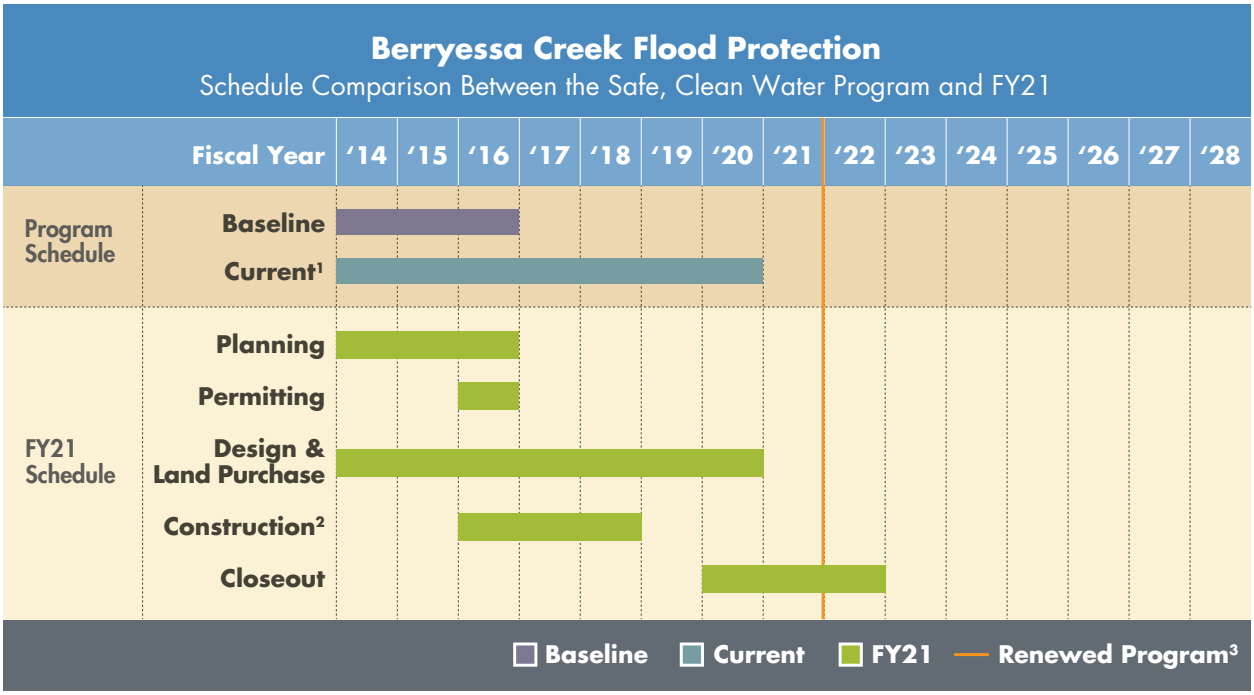
Project Location

Legend

- Project Location
- 1% Flood Risk Zone (As of 2014)
- Flood Protection Provided
- Santa Clara County
- Santa Clara County Cities



Schedule



[1] Board approved a schedule adjustment through the change control process in FY16.
[2] Construction also includes a 3-year revegetation establishment period, not shown.
[3] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 program.

Progress on KPI #1 and #2 (combined):
This project was completed in FY18 with delivery of KPI #1, which included the channel improvements and the Montague Expressway bridge replacement as the two main elements of the project. In January 2019, the USACE installed the on-site mitigation planting. In FY22, the USACE plans to complete construction of a few items needing correction that were identified during final inspection of construction. In FY19, FY20, and FY21, Valley Water continued working with the San Francisco Bay Regional Water Quality Control Board (RWQCB)on permit requirements regarding off-site mitigation. In February 2021, Valley Water and the RWQCB settled on the off-site mitigation requirement.

The USACE completed and submitted to Valley Water the Operations and Maintenance Manual (O&M) in March 2021. Valley Water reconciled the Montague Expressway bridge replacement cost balance with the partner agencies in December 2020. However, finalizing the project cost with the USACE is not possible in FY21 since the USACE is planning to complete construction of the few items needing correction in FY22.

Financial Information

In FY21, 5% of the annual project budget was expended.

KPI #1 was delivered in FY18 and the mitigation planting was completed in FY19. The project's balance reconciliation and agreement obligations for the Montague Expressway bridge replacement was completed with the project partners in December 2020. The project partners are Santa Clara Valley Transportation Authority, Santa Clara County, and City of Milpitas. The budget reconciliation with the USACE for the channel improvements work is anticipated to be completed by the end of FY22.

Financial Summary ($ Thousands)
Berryessa Creek Flood Protection

Fiscal Year 2020–2021									15-year Program		
Project No. and Name	Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan[1]	% of Plan Spent
					Actual	Encumbrance	Total				
26174041 Design and Construction	$27	$12,712	$0	$12,738	$537	$0	$537	4%	$2,492	$17,194	95%
26174042 Real Estate Acquisitions	$0	$1,432	$0	$1,432	$111	$0	$111	8%	$29,554	$29,554	57%
Total	**$27**	**$14,144**	**$0**	**$14,170**	**$647**	**$0**	**$647**	**5%**	**$32,045**	**$46,747**	**71%**

[1] The FY21 annual report is the final report for the 2012 Safe, Clean Water Program. The 15-Year Adjusted Plan for capital projects is based on the FY2021-25 Five-Year Capital Improvement Program (CIP) and its FY21 implementation. It does not reflect the funding allocations developed as part of the FY2022–26 Five-Year CIP, which marked the start of the renewed Safe, Clean Water that replaced the 2012 Program.

Opportunities and Challenges

The original Clean, Safe Creeks Plan for flood protection along Berryessa Creek stretched from Lower Penitencia Creek to Old Piedmont Road, protecting 1,814 parcels. After USACE completed its benefit-to-cost assessment, it was determined that the federal criterion was not met for the reach that lies upstream of Interstate 680. The portion of the

project that was constructed under the Safe, Clean Water Program is the preferred project with local and federal funding (KPI #1), as depicted by the project map. The remainder of the original Clean, Safe Creeks Plan project elements are being constructed by Valley Water with local funding only through the Watershed Stream Stewardship Fund. The portion of Berryessa Creek between Lower Penitencia Creek and Calaveras Boulevard is being constructed in two (2) phases. Phase 1, which spans between Lower Penitencia Creek and just downstream of North Abel Street, was completed in December 2016. Phase 2, which spans between North Abel Street and Calaveras Boulevard, was completed in December 2020.

Project completion celebration.

COMPLETED

Project FY14 Highlights

- Provided flood damage reduction for 2,483 parcels that included: 2,270 homes, 90 businesses, and 7 schools/institutions.

Calabazas Creek Flood Protection

Miller Avenue to Wardell Road

The project's objective was to provide 1% (or 100-year) flood protection to 2,483 parcels in the Calabazas Creek watershed between Miller Avenue and Wardell Road. A long detention basin parallel to the creek was built to capture high storm flows, preventing the creek from overtopping its banks in a 1% flood.

Valley Water repaired 14 severely eroding banks, using as little "hardscape" as possible. The project incorporated environmental stewardship principles to reduce erosion with vegetation to enhance habitat for wildlife. Valley Water reduced the cost of the project by collaborating with the City of San José, which rebuilt a bicycle motocross (BMX) park at Calabazas Park.

On November 20, 2012, Valley Water and the cities of Saratoga, San José, and Cupertino received notification from the Federal Emergency Management Agency (FEMA) that the Letter of Map Revision (LOMR) submittal for the Calabazas Creek Flood Protection Project had been approved resulting in a revision of the Flood Insurance Rate Map for the requested area upstream of Miller Avenue. The project objectives have been met.

Benefits

- Provide flood protection on Calabazas Creek from Miller Avenue to Wardell Road
- Protect 2,483 parcels from 1% flooding
- Provide erosion protection measures to improve stream quality
- Identify environmental restoration and enhancement and recreational enhancements, where opportunities exist

Key Performance Indicator (Completed)

1. Flood damage reduction for 2,483 parcels that include: 2,270 homes, 90 businesses, and 7 schools/institutions.

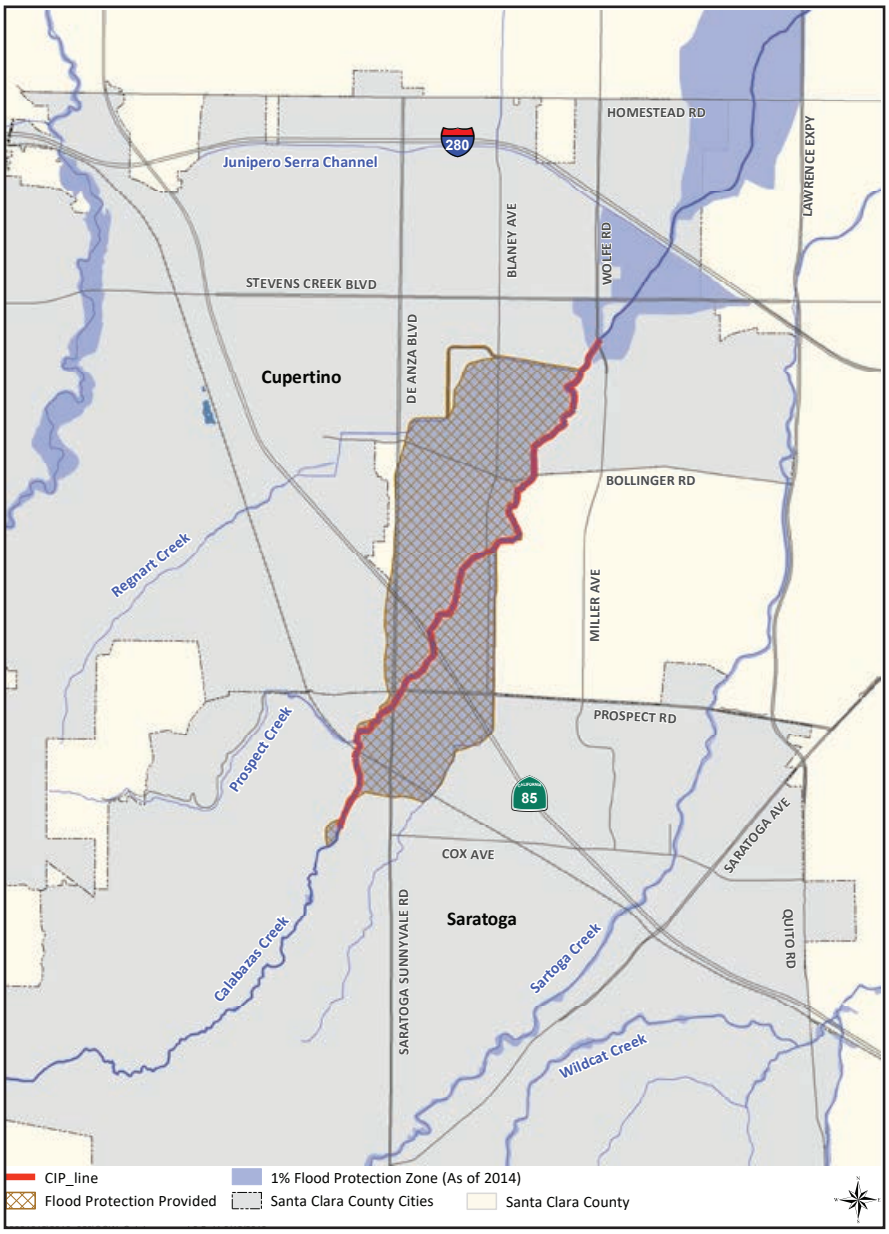
Geographic Area of Benefit: Saratoga, San José and Cupertino

Project Status: COMPLETED

Status History

Fiscal Year	Status
FY 14	COMPLETED
FY 15	COMPLETED
FY 16	COMPLETED
FY 17	COMPLETED
FY 18	COMPLETED
FY 19	COMPLETED
FY 20	COMPLETED

Project Location



Financial Information

The project is closed out and there was no budget or expenditure FY21.

Financial Summary ($ Thousands)
Calabazas Creek Flood Protection

Fiscal Year 2020–2021								15-year Program		
Adopted Budget	Project Carryforward	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	15-Yr Plan & FY13 Enc Bal & Cap Proj Resrvs	Adjusted 15-year Plan	% of Plan Spent
				Actual	Encumbrance	Total				
$0	$0	$0	$0	$0	$0	$0	0%	$1,223	$1,223	5%

Penitencia Creek Trail

COMPLETED

Project FY21 Highlights

- All 46 of the Clean, Safe Creeks grant projects have been completed and closed.

Clean, Safe Creeks Grants Projects

The Clean, Safe Creeks (CSC) Program awarded grants in 3 categories to encourage community involvement in protecting and enhancing the environment. Valley Water awarded grants for 45 projects under the Clean, Safe Creeks Program between FY10 and FY13. As reported in the FY13 Clean, Safe Creeks report, all KPIs have been met as per the executed agreements. However, some grant projects have yet to be completed.

Benefits

These grant agreements address:

- CSC Outcome 2.1: Pollution prevention
- CSC Outcome 3.2: Healthy creek and bay ecosystems are protected, enhanced or restored as determined appropriate by the Board
- CSC Outcome 4.1: There are additional open spaces, trails and parks along creeks and in the watersheds when reasonable and appropriate

Key Performance Indicators [5-year Implementation Plan (FY19-23)]

1. CSC 2.1: Reduce urban runoff pollutants in south county cities.
2. CSC 3.2: Creation of additional wetlands, riparian habitat and favorable stream conditions for fisheries and wildlife. (Equivalent of 100 acres of tidal or riparian habitat created or restored).
3. CSC 4.1: Community partnership to identify and provide public access to 70 miles of open space or trails along creeks.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET
FY 17	ON TARGET
FY 18	ADJUSTED
FY 19	ADJUSTED
FY 20	COMPLETED

Status for FY21: COMPLETED

Progress on KPI #1 - #3 (combined):

As of the end of FY21, all 46 of the Clean, Safe Creeks (CSC) grant projects were completed and closed.
Closed: Project completed – Final project report provided and invoice paid.

Completed: Project completed – Final project report and invoice pending.

In-Progress: Project on schedule for completion by end date.

Cancelled: Project cancelled by grantee.

Extended: Project schedule or scope is being amended.

CSC Grant Table

No.	Grantee Organization	Project Name	Grant Amount Total	Project Start Date	Project End Date	Status
1	City of Saratoga	Village Creek Trail Planning	$39,000	7/1/2011	7/25/2015	Closed
2	Acterra	Adobe Creek Restoration: Redwood Grove to Shoup Park	$46,365	6/28/2011	12/30/2015	Closed
3	City of Cupertino	Stevens Creek Corridor Park and Restoration Project, Phase 2	$285,000	6/28/2011	12/30/2015	Closed
4	City of Cupertino	Stevens Creek Corridor Park and Restoration, Phase 2	$565,000	6/28/2011	12/30/2015	Closed
5	City of San José	Penitencia Creek Trail, Reach 1	$300,000	6/15/2010	12/30/2017	Closed
6	City of San José	Three Creeks Trail – Trestle and Interim Improvements	$450,000	6/28/2011	03/20/2020	Closed
7	City of Santa Clara-Parks & Recreation Department	City of Santa Clara – Ulistac Natural Area Environmental Enhancement	$106,976	6/28/2011	12/30/2015	Closed

CSC Grant Table

No.	Grantee Organization	Project Name	Grant Amount Total	Project Start Date	Project End Date	Status
8	City of Saratoga	Village Creek Trail, Phase 1	$27,000	6/28/2011	12/30/2015	Cancelled
9	SCVWD with: CA Wildlife Fndn, S.F. Estuary Invasive Spartina	Invasive Spartina Monitoring & Control in South Bay Marshes & Creeks	$75,000	6/28/2011	12/30/2015	Closed
10	Town of Los Altos Hills	Adobe Creek Restoration Project at Edith Park	$83,960	9/27/2011	12/30/2015	Closed
11	Town of Los Gatos	Creekside Sports Park Pedestrian Bridge	$300,000	6/28/2011	12/30/2015	Cancelled
12	Trout Unlimited	Little Arthur Creek Streamflow Stewardship Implementation Project	$220,500	6/28/2011	12/30/2017	Closed
13	West Valley College	Tennis Court Wetland Enhancement Project	$109,000	6/28/2011	12/30/2015	Closed
14	West Valley College	Vasona Creek Enhancement Project: Bridge #3 Replacement and Channel Stabilization	$200,000	6/28/2011	12/30/2015	Closed
15	West Valley College	Vasona Creek Native Vegetation Enhancement Project	$180,000	6/28/2011	12/30/2015	Closed
16	Acterra	San Francisquito Creek	$80,000	10/19/2013	6/30/2016	Closed
17	City of Gilroy	Ronan Channel Trail – Interim Project, Phase 1	$190,000	1/29/2014	12/31/2019	Closed
18	City of Los Altos	Adobe Creek Restoration at Redwood Grove – Phase 2	$90,000	12/27/2013	6/30/2016	Closed
19	City of San José	Los Alamitos Creek – Coleman Road Under-Crossing	$62,727	1/8/2014	12/31/2017	Closed
20	Downtown Streets Team	Coyote Creek Encampment Cleanup	$197,848	1/8/2014	6/30/2016	Closed
21	Save the Bay	Palo Alto Baylands Tidal Marsh Transition Zone Restoration	$75,000	12/27/2013	6/30/2016	Closed
22	Town of Los Altos Hills	O'Keefe Preserve Purissima Creek Habitat Restoration Project	$98,425	10/19/2013	6/30/2016	Closed

Financial Information

In FY21, there was no budget.

Financial Summary ($ Thousands) CSC Environmental Enhancement and Open Space Grant								
Fiscal Year 2020–2021							15-year Program	
Adopted Budget	Budget Adjustments	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
			Actual	Encumbrance	Total			
$0	$0	$0	$0	$0	$0	0%	$2,864	124%

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Appendices

Appendix A
Financial Information **A-1**

Appendix B
Inflation Assumptions **B-1**

Appendix C
Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3 **C-1**

Appendix D
Capital Projects Jurisdictional Complexities (Confidence Levels Regarding Outside Agencies) **D-1**

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Cumulative Trash Removal Data for Projects B1-B4, B6 and B7 **E-1**

Appendix F
Schedule Comparison for Projects **F-1**

Appendix G
Projects by Organizational Structure **G-1**

Appendix H
Projects by Valley Water Mission Area **H-1**

Appendix I
Countywide Map of Projects **I-1**

Appendix J
Glossary **J-1**

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Appendix A

Financial Information

To maintain transparency with members of the public the Appendix A section is prepared annually to complement the Safe, Clean Water and Natural Flood Protection Annual Report. The Annual Report provides a wealth of information for individual program priorities and projects; the financial appendices summarize data for the entire program. The following schedules are included:

A-1.1 ANNUAL FINANCIAL SUMMARY highlights Safe, Clean Water projects by Priority for the year of the report (i.e. Fiscal Year 2020-2021). Information includes total program funding sources, annual adopted budget, any Board-approved budget adjustments and actual expenditures.

A-1.2 CUMULATIVE FINANCIAL SUMMARY complements Appendix A-1.1, comparing the original Safe, Clean Water 15-year plan with cumulative program funding sources and expenditure costs. Similar to Appendix A-1.1, information includes total program funding sources, the adjusted 15-year plan by Priority (including any Board-approved budget adjustments), and actual program expenditures to date.

A-2.1 CURRENTLY AUTHORIZED PROJECT RESERVES shows current project reserve balance and increases to project reserves, if any. This appendix is focused on the report year only (i.e. Fiscal Year 2020–2021).

A-3.1 OTHER REVENUE compares other revenue sources by project, for the 15-year Safe, Clean Water Program. Other revenue includes grants, state subventions, rental income and cost-share agreements or reimbursements. Program tax revenue is leveraged to bring in additional local, state and federal dollars, maximizing taxpayer dollars. Actuals to date and a forecast for remainder of the program are included. Other revenue sources are sorted by type and source.

A-3.2 TRANSFERS AND REFUNDING PROCEEDS identifies Safe, Clean Water transfers in, debt and refunding proceeds, and transfers out of the program. This appendix highlights activity to date and includes a forecast for the remaining 15-year program time frame. Where applicable, funds are identified by project.

Appendix A-1.1 Annual Financial Summary Fiscal Year 2020-2021 ($ Thousands)

	Adopted Budget	Carry-forward	Budget Adjustment	Adjusted Budget	Budgetary Actual Total	% Received
Revenue						
Special Tax	45,537			45,537	46,095	101%
Interest	3,400			3,400	(206)	-6%
Other	12,178			12,178	8,843	73%
Subtotal	**61,115**			**61,115**	**54,733**	**90%**
Transfers and Refunding Proceeds	9,770			9,770	8,997	92%
Total Funding Sources	**70,885**			**70,885**	**63,729**	**90%**

Costs	Adopted Budget	Carry-forward	Budget Adjustment	Adjusted Budget	Budgetary Actual			% of Budget Spent
					Actual	Encumbrance	Total	
Priority A: Ensure a safe, reliable water supply								
A1 Main Avenue and Madrone Pipelines Restoration	0	225	0	225	13	0	13	6%
A2 Safe, Clean Water Partnerships and Grants	141	0	77	218	42	0	42	19%
A3 Pipeline Reliability Project	634	538	155	1,327	1,340	17	1,357	102%
Subtotal	**774**	**763**	**232**	**1,769**	**1,395**	**17**	**1,412**	**80%**
Priority B: Reduce toxins, hazards and contaminants in our waterways								
B1 Impaired Water Bodies improvements	1,776	0	41	1,817	1,118	227	1,345	74%
B2 Interagency Urban Runoff Program	856	0	0	856	702	0	702	82%
B3 Pollution Prevention Partnerships and Grants	356	0	435	791	227	235	462	58%
B4 Good Neighbor Program: Encampment Cleanup	922	0	0	922	365	0	365	40%
B5 Hazardous Materials Management and Response	32	0	0	32	24	0	24	77%
B6 Good Neighbor Program: Remove Graffiti and Litter	705	0	0	705	890	51	941	134%
B7 Support Volunteer Cleanup Efforts and Education	206	0	6	212	75	(0)	75	36%
Subtotal	**4,851**	**0**	**482**	**5,334**	**3,401**	**513**	**3,914**	**73%**
Priority C: Protect our water supply from earthquakes and natural disasters								
C1 Anderson Dam Seismic Retrofit	0	0	0	0	0	0	0	0%
C2 Emergency Response Upgrades	354	0	0	354	371	3	374	106%
Subtotal	**354**	**0**	**0**	**354**	**371**	**3**	**374**	**106%**
Priority D: Restore wildlife habitat and provide open space								
D1 Management of Revegetation Projects	900	0	0	900	1,244	0	1,244	138%
D2 Revitalize Riparian, Upland and Wetland Habitat	980	0	0	980	637	298	935	95%
D3 Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	1,727	0	1,681	3,407	395	1,065	1,460	43%
D4 Fish Habitat and Passage Improvements	2,407	2,669	0	5,076	3,395	459	3,854	76%
D5 Ecological Data Collection and Analysis	520	0	0	520	582	49	631	121%
D6 Creek Restoration and Stabilization	170	2,719	0	2,889	643	0	643	22%
D7 Partnerships for the Conservation of Habitat Lands	0	0	0	0	1	0	1	0%
D8 South Bay Salt Ponds Restoration Partnership	0	24	0	24	25	0	25	105%
Subtotal	**6,704**	**5,412**	**1,681**	**13,796**	**6,923**	**1,870**	**8,793**	**64%**
Priority E: Provide flood protection to homes, business, schools, and highways								
E1.1 Vegetation Control for Capacity	2,529	0	0	2,529	2,157	0	2,157	85%
E1.2 Sediment Removal	846	0	0	846	908	0	908	107%
E1.3 Maintenance of Newly Improved Creeks	65	0	0	65	171	0	171	260%
E1.4 Vegetation Management for Access	582	0	0	582	652	0	652	112%
E2 Emergency Response Planning	236	0	0	236	62	78	140	59%
E3 Flood Risk Reduction Studies	1,184	0	0	1,184	1,116	38	1,154	98%
E4 Upper Penitencia Creek	1,382	3,546	2,516	7,444	872	0	872	12%
E5 San Francisquito Creek	370	2,411	0	2,781	994	0	994	36%
E6 Upper Llagas Creek	46,274	5,512	(47)	51,739	41,361	7,502	48,863	94%
E7 San Francisco Bay Shoreline Protection	5	772	530	1,308	1,294	0	1,294	99%
E8 Upper Guadalupe River	(0)	9,403	0	9,403	1,168	1,325	2,493	27%
Subtotal	**53,474**	**21,645**	**2,999**	**78,117**	**50,754**	**8,943**	**59,697**	**76%**
Permanente Creek Flood Protection	0	2,394	3,887	6,280	3,666	1,454	5,120	82%
Sunnyvale East and West Channels Flood Protection	2,033	16,085	0	18,118	811	0	811	4%
Berryessa Creek Flood Protection	27	14,144	0	14,170	647	0	647	5%
Coyote Creek Flood Protection	2,199	802	0	3,002	820	900	1,720	57%
CSC Environmental Enhancement and Open Space Grant	0	0	0	0	0	0	0	0%
Calabazas Creek Miller to Wardell	0	0	0	0	0	0	0	0%
Subtotal	**4,259**	**33,424**	**3,887**	**41,570**	**5,944**	**2,354**	**8,298**	**20%**
Subtotal of All Outcome Costs	**70,417**	**61,244**	**9,280**	**140,941**	**68,789**	**13,700**	**82,488**	**59%**
Safe, Clean Water Planning and Development	4,631	0	(12)	4,618	3,938	28	3,966	86%
Debt Proceeds	0	0	0	0	0	0	0	0%
Debt Service	1,750	0	0	1,750	760	157	917	52%
Management and Maintenance of Acquired Properties	244	0	0	244	233	0	233	96%
Total Program Cost	**$77,041**	**$61,244**	**$9,268**	**$147,552**	**$73,720**	**$13,885**	**$87,604**	**59%**
Net Increase/(Decrease) to Reserves	(6,156)			(76,668)			(23,875)	

Appendix A-1.2 Cumulative Financial Summary Fiscal Year 2014-2021 ($ Thousands)

	15-year Plan	FY13 Enc Bal & Cap Project Reserve	Board [1] Approved Adjusted	Adjusted [2] 15-year Plan	Program-To-Date Actual Total	
Revenue						
Special Tax	722,740		0	722,740	335,388	
Interest	11,676		0	11,676	19,269	
Other [3]	79,714		106,576	186,290	72,117	
Total	**814,130**		**106,576**	**920,706**	**426,774**	
Beginning CSC Reserves	115,623	80,474		196,097	178,074	
Transfers and Refunding Proceeds [4]	0		79,918	79,918	70,532	
Total Funding Sources	**929,753**	**80,474**	**186,494**	**1,196,721**	**675,381**	

	15-year Plan	FY13 Enc Bal & Cap Project Reserve	Board [1] Approved Adjusted	Adjusted [2] 15-year Plan	Program-To-Date Actual			% of Adj. Plan Spent
					Actual	Encumbrance	Total	
Priority A: Ensure a safe, reliable water supply								
A1 Main Avenue and Madrone Pipelines Restoration [5]	8,303	0	9,267	17,570	17,272	0	17,272	98%
A2 Safe, Clean Water Partnerships and Grants	2,360	0	(610)	1,751	981	138	1,119	64%
A3 Pipeline Reliability Project	12,923	0	(830)	12,093	2,285	21	2,307	19%
Subtotal	**23,586**	**0**	**7,827**	**31,414**	**20,538**	**159**	**20,697**	**66%**
Priority B: Reduce toxins, hazards and contaminants in our waterways								
B1 Impaired Water Bodies improvements	26,982	445	0	27,427	9,656	718	10,373	38%
B2 Interagency Urban Runoff Program	12,641	0	0	12,641	5,432	0	5,432	43%
B3 Pollution Prevention Partnerships and Grants	7,595	0	(244)	7,350	2,994	815	3,809	52%
B4 Good Neighbor Program: Encampment Cleanup	5,209	105	10,365	15,679	7,787	0	7,787	50%
B5 Hazardous Materials Management and Response	618	0	0	618	205	0	206	33%
B6 Good Neighbor Program: Remove Graffiti and Litter	10,036	2	0	10,038	4,648	105	4,753	47%
B7 Support Volunteer Cleanup Efforts and Education	2,430	0	(104)	2,326	1,336	147	1,483	64%
Subtotal	**65,511**	**552**	**10,017**	**76,080**	**32,058**	**1,785**	**33,842**	**44%**
Priority C: Protect our water supply from earthquakes and natural disasters								
C1 Anderson Dam Seismic Retrofit	67,053	0	0	67,053	14,000	0	14,000	21%
C2 Emergency Response Upgrades	3,357	0	0	3,357	2,535	3	2,538	76%
Subtotal	**70,410**	**0**	**0**	**70,410**	**16,535**	**3**	**16,538**	**23%**
Priority D: Restore wildlife habitat and provide open space								
D1 Management of Revegetation Projects	22,259	0	0	22,259	6,574	18	6,592	30%
D2 Revitalize Stream, Upland and Wetland Habitat	18,190	0	(3,000)	15,190	3,810	889	4,700	31%
D3 Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	24,092	0	(816)	23,276	5,806	3,224	9,030	39%
D4 Fish Habitat and Passage Improvements	29,176	358	20,631	50,165	14,332	890	5,222	30%
D5 Ecological Data Collection and Analysis	9,020	0	0	9,020	3,278	49	3,327	37%
D6 Creek Restoration and Stabilization	16,719	0	(4,197)	12,522	2,778	0	2,778	22%
D7 Partnerships for the Conservation of Habitat Lands	10,524	0	0	10,524	8,013	0	8,013	76%
D8 South Bay Salt Ponds Restoration Partnership	4,694	0	(296)	4,398	308	0	308	7%
Subtotal	**134,673**	**358**	**12,322**	**147,353**	**44,900**	**5,071**	**49,970**	**34%**
Priority E: Provide flood protection to homes, business, schools, and highways								
E1.1 Vegetation Control for Capacity	24,560	11	0	24,571	11,847	103	11,950	49%
E1.2 Sediment Removal	9,832	16	0	9,848	4,755	16	4,772	48%
E1.3 Maintenance of Newly Improved Creeks	19,051	0	0	19,051	304	0	304	2%
E1.4 Vegetation Management for Access	6,156	0	0	6,156	3,779	0	3,779	61%
E2 Emergency Response Planning	3,891	0	0	3,891	1,080	91	1,171	30%
E3 Flood Risk Reduction Studies	9,374	0	0	9,374	6,231	101	6,332	68%
E4 Upper Penitencia Creek	59,413	0	(34,414)	24,999	2,045	0	2,045	8%
E5 San Francisquito Creek	47,740	2,907	29,731	80,378	51,443	961	52,404	65%
E6 Upper Llagas Creek	84,098	6,784	172,189	263,071	125,215	16,877	142,093	54%
E7 San Francisco Bay Shoreline Protection	22,288	0	1,591	23,879	21,784	4	21,788	91%
E8 Upper Guadalupe River	69,112	39,382	(10,880)	97,614	34,618	5,065	39,683	41%
Subtotal	**355,515**	**49,100**	**158,217**	**562,832**	**263,100**	**23,219**	**286,319**	**51%**
Clean, Safe Creeks Capital Flood Protection Projects								
Permanente Creek Flood Protection	22,111	9,398	50,197	81,706	83,730	2,221	85,951	105%
Sunnyvale East and West Channels Flood Protection	82,249	4,463	(26,268)	60,444	10,137	36	10,173	17%
Berryessa Creek Flood Protection	25,288	6,757	14,702	46,747	29,686	3,538	33,224	71%
Coyote Creek Flood Protection	18,663	5,757	31,671	56,091	4,812	903	5,715	10%
CSC Environmental Enhancement and Open Space Grant	0	2,864	0	2,864	3,554	0	3,554	124%
Calabazas Creek Miller to Wardell	0	1,223	0	1,223	66	0	66	5%
Subtotal	**148,311**	**30,462**	**70,302**	**249,075**	**131,985**	**6,699**	**138,683**	**56%**
Subtotal of All Outcome Costs	**798,007**	**80,472**	**258,685**	**1,137,164**	**509,116**	**39,935**	**546,051**	**48%**
SCW Planning and Development	31,999	2	0	32,002	21,591	36	21,627	68%
Cost of Financing	43,119	–	–	43,119	0	0	0	0%
Debt Proceeds	–	–	–	–	(30,000)	0	(30,000)	0%
Debt Service	0	0	0	0	2,675	157	2,833	0%
Management and Maintenance of Acquired Properties	0	0	0	0	966	0	966	0%
Overhead Adjustment	–	–	–	0	283	0	283	0%
Market Valuation Reserve	–	–	–	–	–	–	0	0%
Currently Authorized Projects [6]	–	–	–	–	–	–	75,205	0%
Operating and Capital Reserve [7]	56,627	(0)	(72,191)	(15,563)	–	–	58,416	0%
Total Program Cost	**$929,752**	**$80,474**	**$186,494**	**$1,196,721**	**$504,632**	**$37,129**	**$675,382**	**56%**

[1] Board approved adjustments include changes to Safe Clean Water capital projects based on the Board approved FY21 CIP.

[2] The FY21 annual report is the final report for the 2012 Safe, Clean Water Program. The 15-Year Adjusted Plan for capital projects is based on the FY2021-25 Five-Year Capital Improvement Program (CIP) and its FY21 implementation. It does not reflect the funding allocations developed as part of the FY2022-26 Five-Year CIP, which marked the start of the renewed Safe, Clean Water that replaced the 2012 Program.

[3] The $186.3M projected Other Revenue includes $100M in unsecured grant funding for the following: (1) $80M for Upper Llagas Creek and (2) $20M for San Francisquito Creek.

[4] Transfers & Refunding Proceeds of $70.5M consists of: $16.1M for proceeds from the 2012 and 2017 refundings and $54.4M from Transfers In for various Safe, Clean Water projects.

[5] Cost of the project is $17.6M. The Water Utility fund will pay $11.4M via transfer; net cost to Safe, Clean Water is $6.2M.

[6] Currently Authorized Project Reserves represents unspent capital project budget that will be carried forward and spent in a future year; refer to Appendix A-2.1 for more detail.

[7] Operating & Capital Reserves are to ensure adequate working capital for cash flow needs and to provide a funding source for operating and capital needs that arise during the year. A negative balance indicates funding needs are projected to exceed funding sources.

Appendix A-2.1 FY21 Currently Authorized Project Reserves ($ Thousands)

		Currently Authorized Project Reserves		
		Unspent Capital Project Budget	Unspent FY20–21 Capital Project Reserves	Total Reserves
Priority A: Ensure a safe, reliable water supply				
A3	Pipeline Reliability Project	(30)	0	(30)
Priority D: Restore wildlife habitat and provide open space				
D4	Fish Habitat and Passage Improvements			
	Almaden Lake Creek/Lake Separation (KPI 1&2)	(35)	374	339
	Ogier Ponds Creek/Lake Separation (KPI 1)	674	512	1,186
	Fish Passage Improvements (KPI 3)	0	0	0
D6	Creek Restoration and Stabilization			
	Hale Creek Enhancement	2,246	0	2,246
D8	South Bay Salt Ponds Restoration Partnership	0	0	0
Priority E: Provide flood protection to homes, business, schools, and highways				
E4	Upper Penitencia Creek Flood Protection Project	6,571	0	6,571
E5	San Francisquito Creek Flood Protection Project	1,812	0	1,812
E6	Upper Llagas Creek Flood Protection Project	3,012	4,470	7,482
E7	San Francisco Bay Shoreline Protection	14	0	14
E8	Upper Guadalupe River Flood Protection Project	6,910	15,239	22,149
Clean, Safe Creeks Capital Flood Protection Projects				
	Permanente Creek Flood Protection	1,325	0	1,325
	Sunnyvale East and West Channels Flood Protection	17,307	0	17,307
	Berryessa Creek Flood Protection	13,523	0	13,523
	Coyote Creek Flood Protection	1,282	0	1,282
	Total Currently Authorized Project Reserves	**$54,610**	**$20,595**	**$75,205**

Appendix A: Other Revenue ($ Thousands)

Table A-3.1 Other Revenue Comparison — Original Program Forecast, Actuals to Date (FY14-20) and Forecast (FY21-28)

Other Revenue Sources	Project Numbers	Original Forecast 2012	Preliminary Actuals Program-to-Date (FY14-21)	Preliminary Forecast (FY22-28)
Capital Reimbursements				
State Subventions				
E6 - Upper Llagas Creek Flood Protection	26174051s	$30,000	$25,112	$13,703
E8 - Upper Guadalupe River Flood Protection	26154001s	$33,044	$16,108	$313
CSC - Berryessa Creek Flood Protection	26174041s	$12,841	$0	$4,384
Grants				
National Resources Conservation Service Grant E6 - Upper Llagas Creek Flood Protection	26174051s		0	$80,000 [1]
Department of Water Resources Prop. 84 Grant E7 - San Francisco Bay Shoreline Protection	26444001s		$12,339	($3,190)
Department of Water Resources Prop 1E Grant CSC - Berryessa Creek Flood Protection	26174041s		$1,950	($288)
Other				
City of Morgan Hill E6 - Upper Llagas Creek Flood Protection	26174051s	$780	$2,009	($749)
Certificate of Participation E-8 Upper Guadalupe River Flood Protection	26154001s		$1,400	$0
City of Mountain View CSC - Permanente Creek Flood Protection	26244001s		$1,102	$0
Cost Share Agreements				
San Francisquito Creek Joint Powers Authority E5 - San Francisquito Creek Flood Protection	26284002s		$9,218	$20,000 [1]
State Operating Grants				
B2 - Inter-Agency Urban Runoff Program	26771011		$156	
Local Operating Grants				
Guadalupe River Coordinated Mercury Monitoring Plan B1 - Impaired Water Bodies Improvement	26752043		$133	
Rental Income				
Fund 26		$3,049	$2,512	
Other[2]				
Fund 26			$79	
Sub-total		**$79,714**	**$72,117**	**$114,173**
Grand Total (Actuals + Forecast)			**$186,290**	

[1] Unsecured.
[2] Includes: Miscellaneous 1-time receipts and other Non-Operating Income, Claims & Judgements, and Cost Recovery for the program.

Appendix A: Transfers and Refunding Proceeds ($ Thousands)

Table A-3.2 Transfers and Refunding Proceeds — Actuals Program-to-Date (FY14–21) vs. Forecast (FY22–28)

	Preliminary Actuals Program-to-Date (FY14–21)	Preliminary Forecast (FY22–28)
Debt Proceeds		
Commercial Paper	$30,000	$60,000
Refunding Proceeds		
2012 and 2017 Debt Refunding	$16,131	$0
Transfers In		
Fund 61 Project A1: Main Avenue and Madrone Pipelines Restoration	$11,378	$0
Fund 12 Project E8: Upper Guadalupe River Flood Protection Permanente Creek Flood Protection Project Project B4: Good Neighbor Program: Encampment Cleanup (90% of Rental Income) Project E6: Upper Llagas Creek Flood Protection Project E4: Upper Penitencia Creek Flood Protection Project B4: Good Neighbor Program: Encampment Cleanup	 $11,900 $1,197 $1,146 $23,690 $4,516 $575 $54,402	 $0 $0 $6,822 $0 $2,516 $0 $9,338
Subtotal for Transfers and Refunding Proceeds	**$70,532**	**$9,338**
Refund of Expenditures		
For Guadalupe River Invasive Exotic Vegetation[1]	$48	$0
Combined Subtotal for Transfers & Refunding Proceeds	**$79,918**	
Transfers Out		
Fund 61 Project C-1 Anderson Dam Seismic Retrofit[2]	($14,000)	($52,053)
Subtotal	**$86,533**	**$17,285**
Combined Grand Total	**$103,818**	

[1] Refunds received in 2014 were for CSC work; refund is offsetting an expenditure.
[2] Captured as a Priority C-1 expense.

Appendix B: Inflation Assumptions

	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Actual FY18	Actual FY19	Actual FY20	Actual FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
COLA Increase %	1.5%	2.0%	3.0%	3.0%	3.0%	4.0%	4.0%	4.0%	4.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Step Increase %	0.2%	0.3%	0.3%	0.5%	0.5%	0.7%	0.6%	0.7%	1.5%	1.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Benefits Rate	52.7%	50.5%	49.6%	53.3%	53.1%	51.9%	52.5%	51.6%	51.0%	55.3%	56.4%	57.6%	57.7%	58.3%	59.5%
Supplies & Svcs Inflation*	3.0%	2.3%	2.7%	3.5%	3.9%	3.2%	1.6%	3.2%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
Construction Cost Inflation**	4.9%	2.3%	3.5%	1.5%	2.5%	2.8%	5.4%	3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

* Actual supplies and services inflation based on the San Francisco-Oakland-Hayward Consumer Price Index for all urban consumers as of June 2021.
** Actual construction cost inflation based on the City Cost Index of Engineering News Record results for the San Francisco Bay Area as of June 2021.

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Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
A2	2014	City of Palo Alto	Business Water Use Reports	The project will research water use among small to medium businesses in the hospitality and food service industries in the Palo Alto area. The project will develop and pilot Business Water Reports that use behavioral science, data analytics and targeting, and informative graphics to communicate water consumption to these businesses.	$45,000	N/A	Cancelled	
A2	2014	City of Palo Alto	Real-Time Water Use Monitoring - Optimal Utility Management Through Visibility to Water Consumption	The project will provide customers with information and tools to monitor their water usea in real-time. The project seeks to enourage active water management at the customer's facilities by making them aware of potential anomalies in water useage. The project will contract with a vendor to provide setup, configuration, analytics, real-time data service, weekly and monthly reports, real-time alerts, ongoing software support, updates and maintenance. The vendor will work with CPAU staff to calibrate the sensing devices for each meter whenever necessary. The vendor will facilitate training on use of the software monitoring platform and assist CPAU staff with the final data evaluation to document program results.	$30,000	N/A	Cancelled	
A2	2014	Our City Forest	Innovative Nursery Irrigation	The project will design and install a prototype of an innovative water-conserving irrigation system in an educational garden.	$30,000	N/A	Cancelled	
A2	2015	City of Morgan Hill	Experimental Turf Irrigation Technology Evaluation at Morgan Hill Aquatics Center	The project will test KISSS, a new lawn irrigation technology system, on two lawn areas near swimming pool on Morgan Hill facility. This pilot project will be designed specifically to test the technology with experimental and control areas of turf.	$48,500	$64,900	Closed December 2017	• No water savings experienced with the KISSS system. Using a different species of grass in a different soil type or climate may conclude with a more positive result. • Conclusion is that the system is appropriate only at sites that are very closely managed by a small number of people and in a low traffic area.
A2	2015	Deal Closet LLC DBA Bay Area Fresh	Low Cost Hydroponics for Cost Effective Growth of Leafy Vegetables	The project will study the efficiency of using farm wastewater for commercial growth of leafy vegetable crops through a hydroponic system in Santa Clara County. The project will use a method that captures wastewater from commercial Nutrient Film Technique (NFT) hydroponic systems and recycle it into another hydroponic method that requires no pumps or additional nutrients beyond those initially applied (Kratky's method).	$25,000	$42,144	Closed July 18, 2017	• Conducted 4 experiments to find out if recycling hydroponic wastewater statistically impacts the growth of food crops. • Results showed that there was no effect between using recycled wastewater and using fresh water, and it's unlikely additional experiments would produce a result as extreme or more extreme than the one from this sample. • Plant sizes were in favor of using the Kratky system over the NFT system. The NFT plants were smaller and slower growing, but had tighter clustering of sizes. • The results showed the Kratky method outdoors outperforms NFT in all cases tested except in the case of heavily reused wastewater.
A2	2015	San Jose Water Company	Advanced Metering Infrastructure (AMI) Residential Pilot Program	The project will evaluate advanced metering infrastructure (AMI) systems for single family residential customers in the Willow Glen area. The project will measure the conservation benefits of an AMI cellular network technical system. The project will transmit data via existing cell network and provide real time data and leak detection to customers and utility staff.	$50,000	$120,015	Closed June 30, 2018	Piloted the technologies on 2 meter reading routes in Willow Glen with approximately 800 customers. Real-time water usage data available via two online portals, for both the utility and customers. Major findings of the study: • Both network systems worked well with no discernable performance differences. • High water-consuming households were more likely to sign up for the portal than low. • In the Badger route, households that signed up for the portal used 24% more water in the year preceding the pilot. In the Sensus route, households that signed up for the portal used 8% more water in the year preceding the pilot.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
A2	2015	San Jose Water Company	Advanced Metering Residential Pilot Program	The project will evaluate the water savings potential by using the new class of advanced water meters such as the ultrasonic E-Series from Badger Meter Inc. (Badger) and Sensus Iperl for SFR customers in San Jose. The new meters complement the proposed automated meter reading infrastructure (AMI) systems that are described in a sperarate grant proposal. The target audience for this project will be two meter reading routes of residential customers located in the Willow Glen neighborhood.	$50,000	$107,844	Closed June 30, 2018	Water conservation results varied by pilot area: • Customers in the Badger pilot area who signed up for the portal used 7% less water in the year after the pilot as compared to the control group. • Customers in the Badger pilot area who did not sign up for the portal used 2% less water in the year after the pilot as compared to the control group. • This information is calculated based on the total water use for one year before and after the Advanced Metering installation.
A2	2015	Bevilacqua-Knight, Inc.	Employee Rewards for Water and Energy Savings Program	The project will partner with large corporate employers in Santa Clara County to educate employees on water efficiency and conservation in their homes through an employee rewards program.	$50,000	$64,324	Closed August 2, 2017	• Ran a 3-month campaign which engaged 431 employees from eBay, VMware and BKi (4% of eligible employees at eBay, 8% at VMware, and 76% at BKi). • Participants logged 59 projects and 3,590 actions that cumulatively were estimated to save more than 1.3 million gallons of water a year. • 97% of VMware participants and 95% of eBay participants thought the challenge was a helpful way to learn about ways to save water. • Almost 90% of participants from VMware and eBay believed it was very important that their company provided opportunities to live a sustainable lifestyle at home and work.
A2	2016	Purissima Hills Water District	Residential Advanced Metering Program	The project will test the efficacy of advanced metering infrastructure (AMI) in reducing water use amongst Purissima Hills Water District customers.	$50,000	$99,200	Closed July 2, 2018	• Installed 400 Beacon end points and registers and compared water usage by Beacon to the Orion AMI. • Customers with Beacon meters saved approximately 46,623 cubic feet of water over 2 years (a 32% reduction in water usage) vs. customers with Orion meters.
A2	2016	Veloctron LLC	Micro Streams Faucet Adapter	The project will install micrometer sensors in businesses in Santa Clara County to determine water useage and detect leaks to help save water.	$30,000	$40,000	Closed June 2018	The 0.1 Gallon Per Minute (GPM) micro-stream faucet adapter developed by Veloctron was proven to be capable of providing satisfactory sensation and efficiency for common washing activities with significantly lower water consumption.
A2	2016	City of Mountain View	Advanced Metering Infrastructure Feasibility Study and Pilot	The project will evaluate available Advanced Metering Infrastructure (AMI) systems and their ability to optimize meter reading efficiency, increase customer service, and promote water-use efficiency within Mountain View.	$50,000	$175,000	Completed March 2019	• 7 customer side leaks were detected out of 150 accounts included in the program. • Average water usage for the pilot accounts were compared during and prior to the pilot implementation and identified that AMI water savings could be as high as 41%. • Implementation of this pilot program identified a useful and underutilized feature that notifies customers when 24 hours of continuous water use was detected. • Recommended that the City continue with implemenation of the pilot program and move to full deployment so AMI to increase operational efficiencies.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
A2	2017	Ecology Action	Every Drop Counts – Investigation of Water Savings from Indoor, Non-Potable Rainwater Harvesting Systems	The project will partner with residential, commercial, and institutional property owners to construct and monitor water use and water quality of rooftop rainwater harvesting systems for indoor, non-potable uses, such as toilet flushing and clothes washing.	$49,940	$97,765	Closed July 24, 2020	• Both residential rainwater harvesting systems reduced the demand for municipal-potable water used for indoor purposes by 15-16% annually. • Annual water savings from the rainwater harvesting systems ranging between 7,866 to 9,768 gallons. • The Los Altos Hills combined rainwater and greywater system reduced municipal water use by 17,952 gallons (or 24 Centum Cubic Feet (CCF)) during the one-year monitoring period. • Over 20 years, the Los Altos Hills residence combined rainwater/ greywater reuse system is estimated to conserve 1.1 acre feet, and the San Jose residence rainwater harvesting system is expected to conserve 0.48 acre feet. • The study found no significant difference in E.coli levels between the minimum code required 100-micron filtration and ultra-violet disinfection.
A2	2017	Fisher Nickel, Inc.	Dipper Well Replacement	The project will measure existing dipper well(s) water use and verify the savings potential through a replacement with best available technologies in a real-world food service setting.	$37,500	$50,000	Closed November 2, 2020	• Between the 5 different test locations, the dipper well replacement technologies demonstrated an average water savings of approximately 250 gallons per day. • This research will be shared with commercial foodservice facilities.
A2	2018	Purissima Hills Water District	Residential Advanced Metering Program	The project will purchase and install 600 advanced metering devices to demonstrate that Advanced Metering Infrastructure (AMI) is an efficient tool to achieve sustained water savings in Purissima Hills Water District (PHWD) service area. This follow-on program will provide the funds to substantially complete the AMI program throughout the PHWD system.	$50,000	$163,969	In progress	
A2	2018	Trust for Conservation Innovation DBA Multiplier	Beyond Leak Detection	The project will conduct a pilot study to characterize the typical water savings from leak detection and water conservation behavior – that households experience following installation of a next-generation leak detection device. The study will evaluate two devices found to have design features that encourages water conservation.	$50,000	$66,667	In progress	
A2	2018	PS Creations LLC	PlateScrape	The project will pilot test the water and energy savings of the PlateScrape technology. This device is built to pre-sanitize plates more efficiently and is estimated to use 75% less water than current spray off methods.	$30,192	$60,392	In progress	
A2	2019	Purissima Hills Water District	Echologics EchoSohre DX Leak Project	The project will test the efficacy of Echologics EchoShore DX Leak detection technology in reducing water throughout the distribution system.	$30,000	$111,530	Cancelled	
A2 Mini-Grant	2021	Association of the Los Altos Historical Museum	Conservation in the Commons: Comparing Methods	The project will install water conservation technology and appropriate explanatory signage in two distinct zones of the Los Altos Civic Center's 10 acres of public land. The project will educate the public about several approaches to water conservation and enourage the adoption of these technologies. The project includes workshops, hands-on demonstrations, and video/photograph social media outreach led by staff and volunteer efforts at the Los Altos History Museum.	$4,997	$24,684	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
A2 Mini-Grant	2021	Environmental Volunteers, Inc.	EV Sprout Up Explores Water Conservation	This project will develop a three-part video series on the water cycle, water conservation practices, environmental justice, and water conservation advocacy. The videos will provide learning opportunities for kindergarten to fourth grade students in Santa Clara County and have corresponding worksheets, activities, and experiments for students. The video series will be developed by EV's Sprout Up college student volunteers.	$4,998	$7,608	Agreement execution in progress	
A2 Mini-Grant	2021	Bay Area Older Adults	Water Conservation Workshop Series for the Older Adult Community	The project will create, promote, and present eight live water conservation workshops for 220 seniors age 55 and over. The project will convey the urgent need for water conservation inside and outside of the home. The video recording of the program will also be shared with 3,500 members and partners.	$5,000	$14,490	Agreement execution in progress	
A2 Mini-Grant	2021	Ani & Cat LLC	Water Conservation in Our Neighborhoods	In conjunction with the "This is Neighborhoods... San Jose" documentary series, the project will include fun and educational video shorts, GIFs, and motion graphics encouraging children and their families to look for ways to conserve water in their homes and yards. The project will encourage participation through games and achievement awards for successfully completing goals.	$5,000	$15,000	Agreement execution in progress	
A2 Mini-Grant	2021	Evergreen Islamic Center	EIC Drinking Water Stations	The project will install two water stations at the EIC facility, one inside and one outside the building. The water stations will serve more than 3,000 people a month on average and will have touchless dispensing feature. The project will eliminate the use of plastic water bottles and paper cups at EIC's daily events.	$5,000	$8,730	Agreement execution in progress	
A2 Mini-Grant	2021	Friends of Master Gardeners of Santa Clara County	Drink What You Grow! Teaching and Demonstration Garden Foundation Project	The project will conduct virtual and hands-on outreach education activities for residents of the county. The project will take place in a 950 sqft. garden and will provide information about edible landscaping in small spaces. The garden will also feature information about a variety of topics including sustainable gardening, waste reduction, and water and aquifer conservaton.	$5,000	$10,666.24	Agreement execution in progress	
A2 Mini-Grants	2021	Smart Yards Education Foundation	Rebuilding Together Landscape Conversion Event	The project will be hosted in partnership with Rebuilding Together and Razing the Bar, and will support current and former foster youth in San Jose who are interested in pursuing a career in ecological lawn conversion. Razing the Bar's foster home will have their front yard landscaped with native plants and water conservation features such as a permeable gravel patio. Smart Yards Education will provide hands-on training and water conservation lessons during the lawn conversion.	$5,000	$6,700	Completed March 2021	Close out in progress.
Total					$741,127	$1,351,628		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B3	2014	County of Santa Clara (Partnership)	Green Business Program	The partnership will fund Green Business certifications to promote the awareness and increase the number of certifications and re-certifications.	$240,000	$240,000	Closed June 30, 2016	The partnership funded the certification of a maximum of 75 businesses over a 3-year period. Partnership achievements: • 90 business certified/recertified in FY14. • 75 businesses certified/recertified in FY15. • 103 businesses certified/recertified in FY16. • Advertisement campaign in FY16 about reducing urban runoff from businesses. Partnership results: • 584,357 milligrams of mercury reduced. • 740,875,831 pounds of solid waste diverted from the landfill. • 955,408,254 pounds/tons of Greenhouse Gas Emissions reduced. • 7,075 gallons of fuel saved. • 530,483 gallons of grease recycled. • 137,936,466 gallons of water saved. • 410,335,999 kWh energy saved.
B3	2014	California Product Stewardship Council	Secure Pharmaceutical Collection Bin Expansion	The project will prevent residential pharmaceutical waste from contaminating waterways by establishing 50 new, convenient and secure pharmaceutical collection bins in pharmacies, hospitals and police stations in Santa Clara County.	$206,417	$276,352	Closed October 6, 2017	• 29 collection sites installed in local pharmacies and a few fire and police departments. • More than a ton-and-a-half (3,280 pounds) of prescription medication was collected from the bins. • Produced a video to educate county residents about the consequences of improper medicine disposal as well as the appropriate disposal method.
B3	2014	San Jose Parks Foundation	Trash Free Coyote Creek Cleanup and Surveillance Project	The project will create a trash free zone in the Coyote Creek riparian corridor between Tully Road and Hellyer Park (including the park) to reduce trash and pollution and their associated impacts on water quality and fishery beneficial uses.	$26,783	$80,760	Closed September 30, 2015	• 14 cleanups. • More than 80,000 pounds trash removed. • 1,296 volunteers participated in a 3-hour event. • Monthly coordination meetings with Park Rangers, Environmental Services and Valley Water.
B3	2014	West Valley College	West Valley College Parking Lot 2 Stormwater Pollution Reduction Project	The project will implement the West Valley College Stormwater Pollution Reduction Plan through installation of stormwater improvements within Parking Lot 2. Stormwater planters will be constructed in the northern sections of the existing parking lot landscape islands and in the northeastern corner of the parking lot. The planters will treat runoff from the parking lot asphalt, concrete, and interior landscaping areas. After treatment, the stormwater will discharge to existing storm laterals off of Allendale Avenue.	$200,000	$1,052,054	In progress	
B3	2015	Silicon Valley Senior Services	Environmental Assist Pharmaceutical Pick-Up (EAPP) Program	The project will help decrease the amount of pharmaceuticals in our drinking water. EAPP's volunteers and local police/sheriff departments will assist seniors and the disabled for safe pick-up of pharmaceutical waste; and provide information and education to Santa Clara County residents about safe disposal.	$90,525	N/A	Cancelled	
B3	2015	City of San José (Partnership)	San José Watershed Community Stewardship & Engagement Project	The project will provide community engagement, outreach and education to engage the homeless population, and provide trash cleanup in both Coyote Creek and Guadalupe River. The work will be conducted in socio-economically diverse neighborhoods along two different watersheds.	$546,250	$1,090,000	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B3	2016	South Bay Clean Creeks Coalition	South Bay Creek Cleanup Program	The project will recruit volunteers through trail and park tabling, and canvassing adjacent neighborhoods. These volunteers will participate in the TEAM 222 Clean Up program, which conducts clean ups every other month at multiple sites, including corporate events; and work on a citizen monitoring network.	$60,000	$80,000	Closed July 21, 2017	• 14 cleanups. • 9.9 tons of trash collected. • 442 volunteers; 946 volunteer hours. • 9 community presentations. • Developed outreach materials, including art work and video about spawning Chinook Salmon. • Conducted social media outreach. • Won the Governor's Environmental and Economic Leadership Award.
B3	2016	County of Santa Clara (Partnership)	Pollution Prevention and Zero Waste Project	The project will implement the Green Business Program, a third-party verified compliance-based program addressing surface water quality, storm water protection, pollution prevention and education. The program will identify pollution sources and provide ways to reduce use of toxic materials, and implement stormwater protection practices.	$200,000	$690,000	Closed July 22, 2020	• 259 businesses certified as Green Businesses. • 3 ads were run in local community newspapers annually • Attended a total of 38 outreach events. • Over 1,600 brochures were distributed throughout the community. • Over 150 posts on various social media platforms • Conducted over 400 business site visits to walk applicants through the certification process.
B3	2016	Acterra Stewardship (transferred to Grassroots Ecology)	Greening Urban Watersheds	The project will provide designs for 4 rain barrels, 2 cisterns and 4 bio-retention/rain garden projects; coordinate 12 hands-on workshops to install rain barrels/gardens on city properties, and conduct 21 community creek cleanup events along 3 creeks; and remove 13,000 pounds of trash from 4 miles of riparian corridors.	$93,617	$189,261	Closed June 29, 2020	• Created 12 plans for 6 rain barrel installations, 2 cistern installations, and 4 bioretentions/rain garden installations. • 12 rain barrel workshops attended by 165 participants • Installed 6 rain barrel systems and 4 cisterns at 6 sites in Palo Alto with a total capacity of 2,055 gallons. • Installed 4 rain gardens. • 22 creek cleanups removed 23,770 lbs of trash along 29 miles of creek corridor with the help of more than 1,000 volunteers for a total of 3,066 volunteer hours. • Published 12 project-related articles (1 local television news. • Installed 508 native plants and 12 signs. • Worked with City of Palo Alto staff and other facility managers to ensure continued proper maintenance of installations.
B3	2016	Santa Clara County Creeks Coalition	Trash Free North Coyote Creek Watershed Stewardship and Engagement Project	The project will conduct 12 volunteer trash cleanups and outreach activities, recruit more than 700 volunteers from business and community organizations and implement a docent-led walks program along 5 miles of north Coyote Creek from Tasman Drive to Jackson Street.	$89,399	$142,239	Closed March 15, 2018	• Conducted 24 cleanup events and removed more than 30 tons of trash from the banks of Coyote Creek in north San José. • Recruited more than 800 volunteers to assist with trash removal and learn about pollution prevention and ecological restoration of the creek. • Delivered 13 presentations to community organizations and attended 12 community events to inform the public about Coyote Creek and opportunities to be stewards of the creek. • Implemented a docent training program and led 10 public nature walks along Coyote Creek. • Documented changes in creek encampments along Coyote Creek, between Watson Park and Tasman Drive.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B3	2016	San Francisco Bay Wildlife Society	Don Edwards San Francisco Bay NWR Clean-Up 2016	The project will collaborate with the San José Conservation Center and volunteers from Don Edwards San Francisco Bay National Wildlife Refuge to remove trash from south San Francisco Bay tidal marshlands, mudflats and adjacent uplands in Santa Clara County. The project will integrate LitteratiTM a social media technology, to create a litter database for long-term trash reduction and provide an interpretive display for education and outreach.	$35,391	$73,390	Closed March 22, 2018	• Removed 6,280.6 pounds (3.14 tons) of trash during 45 days of Litterati cleanups accomplished by 438 people. • 4,403 people were reached through 5 outreach events in Santa Clara County. • Documented 13,002 photos with the Litterati app of every piece of trash collected and disposed of properly. • Cleaned 79.95 linear miles of refuge land and cleaned 100% of each first priority location, including Pond A-8, Pond A-17, Pond A-5/A-7, and Pond A-16. • Removed 509 bags of trash and cleaned 50% of a second priority area at Pond A-15. • Provided 14 presentations about trash prevention and Litterati to community organizations and volunteer groups.
B3	2016	Regents of the University of California	Effective Storage and Composting of Livestock Manures	The project will establish demonstration sites at 4 locations at McClellan Ranch, Emma Prusch and Martial Cottle Parks and the South County Airport. The project will outreach to livestock owners for proper manure storage and safe composting. The work will minimize pathogens from manures from entering stormwater and creeks by demonstrating effective and safe composting.	$60,000	$213,845	Completed December 2019	Close out in progress.
B3	2016	West Valley College	West Valley College North Walk Storm Water Quality Improvements	The project will treat runoff from six acres in the North Walk and Parking Lot 6 sub-watersheds. The project includes the installation of storm water planters, rain gardens and bio-swales to promote infiltration and provide water quality treatment.	$71,068	$648,301	In progress	
B3	2018	City of San José (Partnership)	Pollution Prevention and Creeks Cleanup	The partnership will provide support to Downtown Streets Team, a local non-profit that engages the homeless community through outreach and education, to actively work to maintain litter free waterways.	$195,000	$495,000	Closed February 9, 2021	• Posted 12 social media posts about project activities. • Presented to 4 community organizations. • Educated 425 members of the public about pollution prevention. • Attended 8 community events with approximately 770 attendees. • Collected 13,868 yards of trash throughout Coyote, Guadalupe, and Los Gatos creeks.
B3	2018	City of Milpitas	Contaminant Overflow and Backflow Prevention Project	The project will install additional SmartCovers to equip the City with high-tech devices that will alarm City employees of any possible contaminants in waterways. The Contaminant Overflow and Backflow Prevention Program has, and will continue to, enrich the community with knowledge of the City waterways and City techniques to prevent contaminated overflow, or backflow, into City and nearby creeks.	$30,745	$85,383	Closed July 24, 2020	Purchased and installed 30 SmartCover devices at strategic manhole locations adjacent to water bodies and creeks to prevent contaminants from entering nearby waterways in the event of a sanitary sewer overflow. Project resulted in: • Proactive prevention and reduction of sanitary sewer overflows. • Improved sanitary sewer overflow response time. • Increased protection to the health and safety of the public and environment.
B3	2018	Loma Prieta Resource Conservation District	Reducing Pollutant Source Loads	The project will partner with the University of California Cooperative Extension (UCCE) and the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) to provide four-prong outreach and assistance to limited resource, socially disadvantaged Chinese-speaking farmers in Santa Clara County.	$70,636	$121,436	In progress	
B3	2018	Downtown Streets Team	El Camino Clean Up	The project will prevent litter from entering the water ways along El Camino Real, between Mary Ave and Wolfe Road in Sunnyvale. Volunteers will daily pick up litter daily in the gutters, pass out pocket ashtrays to smokers, and provide literature and education to the community.	$122,280	$190,828	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B3	2018	Downtown Streets Team	Penitencia Creeks Team	The project will improve water quality through reducing homelessness and the associated impacts of trash and debris on Penitencia Creek. The project will recruit and organize program participants living within the project area along the Penitencia Creek, to clean the Penitencia Creek riparian corridor of debris and trash. The project will also conduct peer-to-peer outreach to assist other individuals outside the program to transition to housing, to communicate water quality concerns, and to encourage environmentally responsible behavior in the homeless population.	$122,280	$196,816	In progress	
B3	2018	Santa Clara Valley Transportation Authority (VTA)	Keep Santa Clara Valley Beautiful	The project will develop a countywide program to reduce litter on Santa Clara County's freeways and prevent contaminants from entering nearby underground watersheds and creeks. The project will include the following key elements: • Partner with a national subject matter expert in the community environment preservation field, who will deliver a customized litter prevention program, develop a marketing campaign, and provide technical training for local staff and community leaders. • Procure and install litter enforcement signs at "hot spot" locations. • Organize two to three local volunteer litter clean-up events and one litter prevention summit.	$78,285	$104,380	In progress	
B3	2018	Grassroots Ecology	Westwind Barn Stormwater Infiltration Project	The project will bring together volunteers and community partners to increase stormwater infiltration at Westwind Community Barn in the upper Adobe Creek watershed at the site of a newly decommissioned horse paddock area. This site presents an opportunity to enhance stormwater infiltration and water pollution filtration above Moody Creek. The project will install a series of berms and contour plantings to slow and treat surface runoff as it approaches the creek, and densely plant low-lying areas to further slow and sink runoff. Volunteers will help create berms using nuisance vegetation removed from the project site, install strategically placed native plants along the contour and in topographic low points, and monitor progress by collecting data on water quality above and below the project site.	$70,606	$118,219	In progress	
B3	2019	City of San José (Partnership)	Tully Road Ballfields Creek Cleanup Project	The project will engage in a creek cleanup to address litter, trash and illegal dumping throughout San Jose Council District 7 to reduce trash-related blight. The Project will focus on removing debris that pollutes Coyote Creek by coordinating cleanups, abating homeless encampments, investigating the installation of barriers to reduce re-encampment and engaging the community to address litter and trash.	$200,000	$331,900	In progress	
B3	2020	Grassroots Ecology	Community Based Stewardship of Green Stormwater Infrastructure	The project will partner with the City of Palo Alto to develop a community-based stewardship effort for existing bioretention areas in the City's Southgate neighborhood. The objective of the program is to educate the community about green stormwater infrastructure (GSI) and to involve community members in the stewardship of bioretention areas in their neighborhood. The project will include neighborhood work parties to refurbish and replant existing bioretention areas with locally native plants; and a community adoption program to help monitor and clean bioretention areas; as well as hands-on training for San Jose Conservation Corps members in green stormwater infrastructure care and maintenance.	$89,332	$178,849	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B3	2020	West Valley Clean Water Program Authority	School Site Stormwater Pollution Prevention Plans	The project will educate middle and high school students about contaminants entering our water, and then empower them to make meaningful changes to improve water quality. This is accomplished through the structure of preparing a School Site Stormwater Pollution Prevention Plan (SWPPP). Using the school site as their focus, students will design and implement activities they have identified, using water quality goals, to reduce pollutants from flowing off their campus.	$35,088	$78,230	Agreement execution in progress	
B3	2020	County of Santa Clara	Green Business Program	The project is a compliance-based certification program operated in all 15 cities within Santa Clara County. Businesses seeking certification must meet the minimum requirements in order to achieve certification. The project requires businesses to reduce environmental impacts in areas of energy, water, solid waste, transportation and take initiatives on pollution prevention best practices. In addition to these requirements, businesses must remain in compliance with all federal and state regulations relating to hazardous waste, hazardous materials, wastewater, storm water, food permits, pool & spa safety, fire code, and all other permits as applicable to the business. The Green Business Program partners with city and county compliance inspection agencies to educate businesses as well as utility partners and haulers to help businesses look for rebate incentives to become more sustainable.	$120,000	$530,460	Agreement execution in progress	
B3	2020	Children's Discovery Museum of San Jose	Exploration Portal: Preventing Pollution	The project will implement an Exploration Portal, a 4,000 square foot addition to the half-acre outdoor environmental education area at the Children's Discovery Museum of San Jose, known as Bill's Backyard: Bridge to Nature. This project provides the opportunity to design and build a public space that prevents toxic runoff to the Guadalupe River while also offering educational experiences and facilitated programs. The project will showcase natural and human-made methods to prevent contaminants and other pollution from running off the nearby streets and trails into the Guadalupe River.	$144,500	$3,155,938	In progress	
B3	2020	Guadalupe River Park Conservancy	Reducing the Impacts of Litter Along the Guadalupe River Trail	The project will provide stewardship along the four-mile segment of the Guadalupe River Trail between Virginia Street and Skyport Drive in downtown San Jose (Trail). The project will remove litter and debris along the Trail; provide rapid response to major pollutant threats; increase homeless outreach; create a more welcoming Trail environment; and provide education about the impacts of pollution reduction to the community.	$90,049	$225,100	In progress	
B3	2021	City of San José (Partnership)	Cash for Trash	The partnership will engage the homeless community to assist with creek cleanups by expanding the City's current Cash for Trash Program to include encampment residents who reside along Valley Water creeks and waterways.	$180,000	$310,500	In progress	
Total					$3,468,251	$10,899,241		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2018	South Bay Clean Creeks Coalition	Los Gatos Creek TEAM 222	The project will recruit volunteers for stream cleanups addressing the on-going trash loads in the riparian corridors and creek created by homeless encampments and storm run-off. The TEAM 222 Program will conduct multiple events every other month on the second Saturday along stretches of Los Gatos Creek.	$15,000	$19,995	Closed December 8, 2020	• Participated in 2 volunteer recruitment events. • Hosted 5 cleanup events with 276 volunteers. • 583 hours expended by volunteers at cleanups sites. • Collected 9.1 tons of trash. • Shared 4 social media posts and updated the website about the cleanup program. • Created a recycled art project.
B7	2014	Girl Scouts of Northern America	Girl Scouts Go Green in Santa Clara County	The project will implement an environmental outreach and education program focusing on "providing education and outreach for reducing pharmaceutical waste and other pollutants in our waterways (showing a benefit through awareness and engagement)."	$44,116	$56,205	Closed July 31, 2016	The 10-week afterschool environmental stewardship program was held at 18 partner sites in Santa Clara County in which: • 487 girls participated. • At least 4-8 hours were spent on hands-on environmental learning. • At least 4-6 hours were spent on environmentally-focused field trip. • At each partner site girls engaged in 2 community action projects. • More than 7,500 community members were reached through each of the girl-led community action projects. By the end of the program: • 82% of participating girls were able to name 2 or more actions they can personally take to prevent waste or pollutants from entering waterways, as measured by the post-program surveys. • 97% of participants were able to explain why mercury and pharmaceuticals are harmful when they enter our waterways, as measured by instructor observation. • 80% of participating girls reported that they could have a job that helps the environment, as measured by post-program surveys. • 91% of girls showed increased interest level in learning about environmental science, as measured by post-program surveys.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes

B7	2014	Clean Water Fund	ReThink Disposable: Preventing Riparian Trash at the Source	This project is the continuation and expansion of a public-private partnership project involving Clean Water Fund (the project lead), and local government. The project (originally Taking out the Trash, but renamed ReThink Disposable), is currently a partnership with the cities of Oakland, San José, South San Francisco, San Francisco, the County of San Mateo, and Stop Waste of Alameda County.	$82,133	$122,626	Closed July 6, 2017	• Successful coordination with the cities of San Jose, Cupertino and Sunnyvale.
								• 91 food businesses and 8 institutions in the County received outreach and promotional materials to participate in the free ReThink Disposable audit and technical assistance.
								• 8 presentations were delivered to various business associations and corporations in the county to promote the program to the target food business.
								• Coordinated with the Green Business Program on outreach and adoption of waste prevention best management practices for food businesses, not just diversion by way of compostable and recycling single use food service ware.
								• 12 food businesses and 1 institution successfully completed the ReThink Disposable audit yielded the following annual impact numbers:
								  • 1,424,038 pieces of disposable foodware items eliminated.
								  • 24,265 pounds of waste prevented.
								  • $5,963 average cost savings after payback period was met.
								• Hosted 4 creek cleanups with 127 volunteers removing almost 4,000 pieces of trash and debris (mainly plastics) from "hot spots" on Calabazas and Coyote Creeks.
								• Hosted 1 ReThink Disposable Free Community Workshop and Training with almost 60 attendees from watershed and creek groups, teachers, and local government staff.
								• Developed a new public education tabling pop-up display including researching, developing and designing 2 new life cycle impacts info-graphics on Disposable Cups and Straws.
								• Engaged almost 30,000 residents in the County with the new ReThink Disposable Source Reduction Pledge.
								• San Jose's Hauler, Republic, promoted ReThink Disposable in a feature article in their quarterly newsletter mailed to 30,000 accounts.
								• Won the 2015 Governor's Award for Environmental and Economic Leadership and the 2016 California Resource Recovery Association's Excellence in Waste Prevention Award.
								• Resulted in 2 new contracts with the City of Palo Alto and the Santa Clara Recycling and Waste Reduction Commission totaling $230,000 over the next three years. This will fund 60-80 more ReThink Disposable certified food businesses and 3-5 institutions in the county.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2014	City of Sunnyvale	Schools Goin' Green	This project is a partnership between the cities of Sunnyvale and Cupertino, along with 2-3 middle schools and 2 high schools, through their service organizations or environmental clubs. The project will encourage students to clean up litter on and around their school campuses and neighborhoods and to implement student-led campaigns to change the littering behavior of fellow students.	$32,250	$47,448	Closed June 30, 2016	• 6 schools participated, of which 5 schools also established ongoing campus Green Teams. • 3,421 youth participated in project events. • 98 cleanups over the course of the project. • More than 4,189 pounds of litter collected. • All teams participated in the City's Students Living Green App Challenge in April 2016. • Youth designed a logo for Schools Goin' Green. • The project was identified as an outstanding stormwater project by the California Stormwater Quality Association (CASQA).
B7	2014	Save the Bay	Clean Bay Project	The project will build on the strong track record of supporting municipalities and community groups to eliminate significant components of plastic trash in storm water and reduce highly toxic tobacco litter in the San Francisco Bay to benefit water quality and public health.	$60,000	$241,243	Closed June 30, 2016	• More than 2,200 pounds of micro-trash debris removed from Coyote Creek, through community-based restoration and trash removal projects. • Successfully advocated for the San Francisco Bay Regional Water Quality Board adopting a stronger Municipal Regional Stormwater Permit in November 2016. The permit now includes additional trash reduction milestones and monitoring requirements, such as 70% trash reduction by 2017; 80% by 2018. • Analyzed data from the 2015 annu al reports submitted by cities, counties, and districts holding stormwater permits and using the information to support Santa Clara cities accelerate their progress towards the goal of Zero Trash by 2022. • Created a Monitoring and Education Tool for Plastic Bag Ban Ordinances (and recently added one for Styrofoam bans). • Carried out "Zero Trash, Zero Excuse" public education campaign. • Successfully advocated Sunnyvale adopting and strengthening its smoking ordinance.
B7	2014	Environmental Volunteers	Education for Clean Water	The project will leverage the Environmental Volunteers' skilled and committed base of volunteer docents to deliver hands-on, Citizen Science based Water Resources education to school classrooms and the general public.	$25,092	$30,271	Closed June 30, 2015	• Conducted education activities in the Palo Alto Baylands Nature Preserve, utilizing the EcoCenter facility and the ecologically rich marshland surrounding it. • Developed and produced site resource guide. • 35 volunteer docents trained in new curriculum. • 12 local elementary schoo classrooms (more than 300 students) participated in field study excursions. • 818 community members participated in clean water education program, including art showfeaturingthematic works bylocal school children; earth day event; Girls-in- Science forum; and drop in visitors at the EcoCenter. • Citizen science data collection and data- sharingthrough Field Scope, a citizen science data sharing project. • Youth Leadership Board developed a new website promoting wise water use.
B7	2018	Girl Scouts of Northern CA	Green By Nature in Santa Clara County	The project will provide a successful, meaningful watershed educational experience for students attending Title 1 schools and living in under-resourced neighborhoods in Santa Clara County using the Don't Waste that Watershed series curriculum.	$16,951	$23,384	Closed May 5, 2021	• A total of 267 girl scouts participated across 7 school sites in Santa Clara County. • Post-survey results indicated that 80% of participants plan to take actions to protect the environment and encourage others to do the same, demonstrating environmental stewardship. • 75% of participants can explain why pollution is harmful when it enters our waterways. • 80% of participants developed resourceful problem- solving skills, and are willing to seek challenges, and collaborate with others, and feel empowered to make a difference in the world.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2018	Save the Bay	Zero Trash Campaign	The project will evaluate annual trash reduction reports, educate and inform residents on the results of those reports, and provide particular feedback to two priority cities. The project will implement an effective outreach and communications strategy to increase and shape priority of Santa Clara County communities' understanding of storm water pollution threats and opportunities. The project will engage 4,000 adults, teens, and children in wetland habitat restoration and/ or trash cleanup projects.	$15,000	$122,051	Closed Novemer 30, 2020	• Educated the community about non-municipal sources of pollution, emphasizing the importance of controlling trash generated on the highways, for meeting zero trash goals and protecting watersheds across the Bay. • Provided the City of San Jose with feedback and guidance to support their adoption of a citywide, cross-departmental urban greening program, which will integrate trash flow and water quality infrastructure concerns across multiple ongoing projects. • Hosted 1,123 student and adult volunteers at Adobe Creek Trail and the native plant nursery at the Palo Alto Baylands habitat restoration site and completed 3,186 total hours of environmental stewardship activities. The program was designed to increase awareness of the about the impact of toxic pollutants on local Santa Clara County watersheds. • Shared 4 blog posts on their website about trash prevention with a total of 1,622 page views.
B7	2014	San Jose Parks Foundation	Trash Free Coyote Creek Education and Outreach Project	The project will reach out to neighborhood and civic groups, trail users and businesses to educate them about the potential for cleaning up and keeping the Coyote Creek clean through volunteer cleanups; and enlist their participation in creek cleanups and weekly creek inspections to create a Trash Free Coyote Creek.	$42,199	$59,339	Closed September 30, 2015	• 150 people attend a day-long Coyote Creek Howl conference held at San José State University. • 9 informative brochures produced on topics such as birds, plants, geology of Coyote Creek. • 32 presentations to community organizations. • 1-2 email newsletters a month to about 1,000.
B7	2014	Acterra	Acterra Lower Peninsula Healthy Creeks Project	The project will bring together the resources and talents of nonprofit organizations, academic institutions, municipalities, government agencies, and the general public to provide a variety of hands-on creek stewardship activities and watershed education events designed to attract participants of all ages.	$68,600	$179,910	Closed September 30, 2016	• 4,225 participants (1,305 volunteers and 2,920 education participants). • 24 volunteer water quality monitoring events on Stevens, San Francisquito (and its tributaries), Matadero, Barron, and Adobe Creeks. 17 events on Permanente Creek. • High quality data for 23 water monitoring sites and 7 benthic macroinvertebrate sites. • 14.75 miles of riparian areas cleared of trash. • 18,180 pounds of trash collected. • 10 World Water Monitoring Challenge events. • 8 quarterly Watershed Forums. • 10 newsletters.
B7	2018	Guadalupe River Park Conservancy	Guadalupe Watershed Education Campaign	The project will enhance awareness of the biodiversity nurtured by Guadalupe River through programs for K-12 students, the annual Water Festival for 5thgrade students, activation of a 180-gallon aquarium, and the creation of a mural underneath the Coleman Ave. bridge.	$28,410	$47,450	Completed December 2020	Closeout in progress
B7	2018	Breathe California of the Bay Area	Youth for a Cool Earth (Y4CE)	The project will empower youth to become environmental leaders and advocates to their peers, school, family, and community to do the same. The unique feature of the Y4CE program is that it is youth-determined and youth-directed. The project will target marginalized/low-income youth.	$35,000	$47,023	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2018	Gilroy Compassion Center	South County Creeks Team	The project will be a partnership between Gilroy Compassion Center and Downtown Streets Team, local jurisdictions, and other organizations to provide year-round outreach to homeless individuals living at target hot spots along South County Creeks. The outreach teams will provide information, encouragement, and incentives for homeless individuals to keep toxic materials, garbage, and waste out of the waterways.	$15,000	$40,973	In progress	
B7	2018	City of Campbell	Los Gatos Creek Trail Interpretive Signage and Receptacle Expansion	The project will install ten environmental outreach stations along the Los Gatos Creek Trail, which parallels Los Gatos Creek and related percolation ponds. The stations, spaced along approximately 5.7 miles of the trail, would include educational interpretive signs with environmental stewardship messages related to trash and general health of riparian corridors.	$33,731	$80,563	In progress	
B7	2018	South Bay Clean Creeks Coalition	Friends of Coyote Creek Watershed North Coyote Creek Stewardship Project	The project will recruit volunteers for stream cleanups to address the ongoing trash loads in the riparian corridor and creek created by homeless encampments and storm run-off. The project will conduct monthly cleanups with the goal of restoring stretches to trash free levels.	$35,000	$46,655	In progress	
B7	2018	Grassroots Ecology	Stevens Creek Monitoring & Education Project	The project will engage the local community in stewardship and hands-on learning. The project will provide creek-based volunteer and educational opportunities for all ages. The project will engage 750 or more individuals and approximately 15 organizations including schools, colleges, nonprofits, and community groups.	$34,459	$69,900	Completed May 4, 2021	Close out in progress.
B7	2018	South Bay Clean Creeks Coalition (Partnership)	Guadalupe River/ Coyote Creek Watershed Community Engagement Project	The project will conduct volunteer cleanups and educational stewardship opportunities around the Guadalupe River/Coyote Creek Watershed.	$199,353	$199,353	In progress	
B7	2019	Gilroy Compassion Center	South County Creeks Team	The project will engage local homeless individuals to go out to encampments along the creek areas of Gilroy providing services such as: outreach, education, and disposal of garbage. The project aims to reduce contaminants that are entering Santa Clara County waterways and groundwater that poses an environmental threat to communities. Creek Team members will visit different hot spots in Gilroy identified by Valley Water to clean garbage and debris from creek beds. Homeless individuals will receive case management services and will be entered into the Homeless Management Information System (HMIS) and they will be given a VISPADT survey where they will be prioritized for permanent supportive housing.	$30,000	$38,590	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2019	Grassroots Ecology	Young Watershed Stewards Project	The project will engage the local community in stewardship and hands-on learning that benefits the Stevens Creek, San Francisquito, and Matadero Creek watersheds within Santa Clara County. The project will update and expand on Grassroots Ecology's high school stewards' programs based at Arastradero Preserve and McClellan Ranch Preserve to include watershed stewardship topics and add a community outreach component. High school stewards will engage with their local creeks through activities such as water quality testing, riparian planting, trash removal, and education on pollution entering these waterways. These stewards will take what they've learned into the broader community through a project at their school, presentations at community events, or other outreach.	$44,301	$167,781	In progress	
B7	2019	The Tech Museum of Innovation	Down the Drain	The project will provide Down the Drain Science Labs to Title I field trip groups during the 2019-2020 and 2020-2021 school year. The project will focus on offering resources to educators and modeling facilitation of watershed lessons. The project will also include remediation to align educator resources to the water-related exhibits in the Tech Museum's new Solve for Earth exhibition.	$21,811	$29,121	In progress	
B7	2021	Bay Area Older Adults	Watershed Waste Reduction Program	The project will reduce pharmaceutical waste in Santa Clara County's waterways and groundwater. The project will educate and outreach to a multi-cultural group of 6,600 low-income, homebound, and disabled adults age 60 and above, as well as tens of thousands of disadvantaged Santa Clara County residents of all ages. The project will teach participants about proper medicine disposal, including mail-back collection services, to help protect the quality of water and aquatic and riparian ecosystems around them. Participants will also learn the importance of preventing medication errors, a leading cause of death, hospitalization, and disability among older adults.	$40,985	$137,769	Agreement execution in progress	
B7	2021	Grassroots Ecology	Coyote/Stevens Creek Watershed Community Engagement Project	The project will be a partnership between Grassroots Ecology and Keep Coyote Creek Beautiful to provide opportunities for watershed education and stewardship along the Coyote Creek and Stevens Creek watersheds. The project will help an estimated 750 - 850 community members connect with their watershed by learning about creek ecosystems through hands-on clean-up efforts and virtual lessons and lab investigations.	$49,980	$101,026	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
B7	2021	IISME, DBA Ignited	Santa Clara Water Weeks	The project will consist of two separate externship weeks, called "Water Weeks," occurring over consecutive summers. The project will include a virtual Water Week with Valley Water for 33 Santa Clara County teachers. The project will leverage matching funds from the Jewish Vocational Service (JVS), which covers the second half of the project—a Water Week for 10 additional Santa Clara teachers with the City of Gilroy Public Works, City of San José Environmental Services, and City of Sunnyvale Environmental Services. Both weeks will also include representatives from Gavilan Community College's Water Resources Management degree program, as an example of a potential next step for the teachers to promote to their high school students as a potential career pathway. In partnership with BAYWORK, a consortium of Bay Area water and wastewater utilities, the Water Weeks program helps bolster the workforce needed to serve customers and protect the environment.	$47,593	$66,057.92	Agreement execution in progress	
B7	2021	Silicon Valley Bicycle Coalition	Wheels and Waterways	The project will expand on the previous Wheels and Waterways Project series and hold a community bike ride that engages participants to learn about their role in environmental conserwvation. The project will include educational stops, clean ups, and expert speakers. The project will make a concerted effort to recruit new and beginner- level riders in an effort to encourage bike riding as a sustainable form of transportation.	$50,000	$81,213.96	Agreement execution in progress	
Total					$1,066,964	$2,055,948		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2014	Acterra	McClellan Ranch Preserve Meadow Enhancement Project	The project will be collaborative and volunteer-based to remove invasive plants and establish an "island" of native plants within a riparian meadow adjacent to Stevens Creek.	$164,200	$426,452	Closed June 30, 2017	• 3 years of vegetation survey data showing a decrease in invasive plant population, including Italian thistle. • Close to 12,000 native plants installed covering more than 1 acre of the meadow. • Increased habitat value and diversity as result of planting more than 30 different types of native plants. This has led to increased native wildlife (more native insects, birds, and pollinators have been seen). • More than 3,500 community members engaged through 352 volunteer events; contributing 7,427 volunteer hours.
D3	2014	Santa Clara County Open Space Authority	Coyote Valley Open Preserve South Valley Meadow Restoration Project	The project will restore the hydrologic function and habitat value to an 8.5 acre seasonal wet meadow and riparian complex by restoring more than 800 yards of altered drainages, reseeding approximately 4.5 acres with a climate-smart native plant palette, and providing an extension of connected lowland California Tiger Salamander habitat into Coyote Valley.	$256,276	$579,386	Closed June 30, 2017	• 8.5-acre seasonal wet meadow and riparian complex recontoured and planted with perennial grasses and native plant species. • 0.1-acre pond created on-site. • 900 feet of incised channel raised and widened. • 7 granite rock weir grade control structures placed. • 1 loose rock head cut repair structure placed. • Roughly 20% of 50-acre watershed drainage reconnected to wet meadow valley floor.
D3	2014	Acterra	Foothills Park Riparian Enhancement Project	The project will monitor, restore and enrich wildlife habitat along the Park's four miles of riparian corridors in the upper San Francisquito watershed, including Los Trancos Creek and Buckeye Creek.	$126,300	$293,753	Closed June 30, 2017	• More than 1,300 community members engaged through 94 volunteer events; contributing 4,380 volunteer hours. • 4 miles of creek monitored during 21 sediment monitoring days. • 4 miles of creekside vegetation surveyed for pre- and post-project comparison. • 2,755 linear feet of invasives removed. • 1,025 native plants installed. • More than 24 native species planted. • 200 willow cuttings installed. • Increased native plant species richness along Los Trancos and Buckeye Creeks. • Decreased invasive plant populations including target noxious weeds.
D3	2014	West Valley College	Vasona Creek at West Valley College: Stream Stabilization and Habitat Enhancement Phase 2	The project will restore 400 linear feet of Vasona Creek within West Valley College Campus in order to eliminate gully erosion, protect heritage trees, and restore hydrology.	$300,000	$421,732	Closed November 15, 2016	• 740 linear feet of severely eroded and deeply cut channel reconstructed. • 0.2 acres of native riparian vegetation seeded and planted. • 432 native plants installed, including 85 willows alongside channel. • 36 Dusky Footed Woodrat nests protected in construction area, 15 nests relocated. • 10-year Monitoring, Maintenance and Reporting Plan. • Created an active college administration/ faculty "Stream Team" integrating project into curriculum. • Created a natural outdoor "classroom" and living laboratory in newly restored creek corridor. • Raised student and public awareness of environmental issues and restoration. • Extensive public engagement with community workshops, and volunteer efforts.
D3	2014	Resource Conservation District of Santa Cruz County	Uvas Creek Steelhead Spawning Habitat	The project will improve in-stream habitat in multiple locations along a 3.7 mile reach 1 below Uvas Dam.	$446,755	$592,905	Closed November 30, 2017	• Removed and disposed of approximately 175 acacia trees (a non-native, evergreen species which create creek habitat limitations) on 2 project sites. The project sites were continually monitored to assess acacia regrowth and the need for active revegetation. • About 1,800 linear feet of riparian habitat was restored. • Conducted 3 educational outreach to provide educational information for landowners, demonstrate riparian restoration efforts, and garner local support for continued efforts on Uvas Creek.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2015	Trout Unlimited (Partnership)	Lower Uvas-Carnadero Creek Agricultural Wet Fort Alternative Design	The partnership will result in the design of a free span bridge and the abandonment of the existing bridge. This would eliminate the fish migration barrier and improve water quality and riparian conditions. Valley Water's contribution will provide a matching fund for a state grant application.	$24,450	$107,115	Closed May 31, 2018	• Completed 100% design (civil, geotechnical, structural) of a free span bridge across Carnadero Creek which, when constructed, will allow for the abandonment of an existing agricultural "wet ford" and the abandonment of several hundred feet of existing dirt farm roads and accompanying access easement along the riparian corridor on lands owned by Valley Water. The bridge has the potential to provide improved habitat and migration conditions for threatened Steelhead Trout.
D3	2015	San Francisco Bay Bird Observatory (Partnership)	Active Vegetation Management at Levees around South Bay Salt Pond	The partnership will create transitional and upland habitats and provide the habitat structure needed by several federally listed species and state Species of Special Concern. Creating native plant communities on a 15-acre site will require two years of preparation and four years of phased implementation, maintenance, and monitoring. The project will restore wildlife habitat; strengthen the South Bay Salt Ponds Restoration Partnership and revitalize wetland habitat. The work will also build upon the strong existing partnership between Valley Water and the U.S. Fish and Wildlife Service to improve habitat on salt pond levees.	$690,000	$1,327,106	In progress	
D3	2015	County of Santa Clara	Calero County Park Oak Cove & North Shore Trails	The project will construct approximately five miles of natural-surface multi-use trails adjacent to Calero Reservoir.	$125,980	$212,738	Closed July 2020	• The Oak Cove Trail officially opened in April 2020. • Constructed a natural surface and single-track trail approximately 5 miles in Calero County Park located in Santa Clara, California. • Constructed one culvert, one free-span bridge, 22 rock fords and 24 drainage crossings.
D3	2015	Santa Clara County Open Space Authority	Outdoor Learning Center and Creek Side Valley Loop Trail	The project will construct an Outdoor Learning Center within the 348-acre Coyote Valley Open Space Reserve, to serve as an outdoor classroom, a meeting location for educational and interpretive programs. This project will also incorporate 0.6 miles of ADA accessible trail.	$200,000	$541,780	In progress	
D3	2015	West Valley College	Vasona Creek Trail	The project will provide 0.33 miles of new ADA accessible trails within the West Valley College Campus.	$171,000	$465,725	In progress	
D3	2016	Santa Clara Valley Chapter of the California Native Plant Society	Plant Pathogen Training and Education at CNPS Nursery	The project will develop instructional/training videos to educate nursery professionals in pathogen control Best management practices (BMPs); promote safe use of California native plants through outreach and education events hosted by the California Native Plant Society (CNPS) throughout Santa Clara Valley Watersheds, and provide demonstration and training sites at CNPS Nursery in Hidden Villa, Los Altos Hills, to implement plant pathogen control BMPs onsite, to share successes and lessons with other nurseries, and train volunteers and the larger community in pathogen control best practices.	$50,574	N/A	Cancelled	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2016	San Francisco Bay Bird Observatory	Establishing Forster's TernNestingColonies for the South Bay Salt Pond Restoration Project Using Innovative Technologies	The project will deploy and maintain 300 decoys and six electronic call systems during the 2017 and 2018 breeding seasons (March-August) to attract birds to nest. Findings will be shared with the Don Edwards San Francisco Bay National Wildlife Refuge and the South Bay Salt Pond (SBSP) Restoration Project's outreach program; through the project website, newsletter, and presentations at stakeholder meetings. Using innovative technologies, this project aims to re-establish a healthy nesting population of at-risk Forster's terns in Alviso Pond A16 on the Don Edwards San Francisco Bay National Wildlife Refuge. Benefits of this project include attraction of 50 or more Forster's tern breeding pairs to Alviso Pond A16 and establishment of nesting colonies with nest success rates of 60% or more.	$217,032	$294,074	Closed April 30, 2018	• Deployed 300 Forster's tern decoys and 6 electronic call systems on 6 islands in Pond A16 during the 2017 breeding season. • Conducted bird surveys between March and August 2017 to evaluate bird response and the results of the project suggest that implementation of decoys and electronic call systems was successful in attracting Forster's terns in Alviso Pond A16. • 197% increase in the number of Forster's terns in the pond in May 2017 compared to similar results recorded in May of 2016. • More Forster's terns were observed around islands with decoys and electronic call systems compared to islands without them, an approximately 6:1 ratio. • 8 educational outreach activities were completed: a project website, 1 educational video, 3 public presentations, 1 publication of popular article, 2 visits with local elementary school students.
D3	2016	Save The Bay	Palo Alto Baylands Tidal Lagoon Transition Zone Habitat Restoration Project	The project will restore and enhance 1.25 acres of high value tidal marsh transition zone habitat at this site immediately adjacent to existing tidal salt marsh in the Palo Alto Baylands Nature Preserve. It will create or improve crucial habitat that provides connectivity and refugia for waterfowl, shorebirds, and other species such as the federally- endangered Ridgway's Rail and salt marsh harvest mouse. The project is ready to implement and will increase the adaptive capacity and resilience of tidal marsh species by enhancing the plant community and wildlife habitat both now and in light of future predicted sea level rise scenarios.	$95,868	$235,335	Closed December 14, 2020	• Restored and enhanced approximately 1.25 acres of tidal marsh transition zone native coverage to help provide habitat and food source for sensitive wildlife species, including native birds, small mammals, and federally endangered species. • Collected site-specific seeds, propagated, and planted over 8,000 native wetland plants from Save The Bay's native plant nurseries. • Increased structural integrity and complexity to the transition zone and connectivity to the adjacent marsh by installing a suitable assemblage of plants that also contribute to the native seedbank. • Involved approximately 1,000 volunteers, including local students and community members. • Educated community groups, local businesses, and schools about the importance of critical wetland habitat for fish and bird species and engage them in habitat restoration and monitoring.
D3	2016	Friends of Stevens Creek Trail	Stevens Creek Steelhead Passage Improvement Project	The project will conduct a Phase 1 study plan to analyze alternatives and identify a preferred alternative for improving fish passage; and develop alternatives and identify a preferred alternative to improve fish migration at project sites.	$52,162	$75,332	Closed December 7, 2017	• Identified potential engineering solutions to 8 fish passage impediments. • Provided hydraulic analysis, conceptual drawings, and estimated costs for projects at the selected locations. • Conducted 2 workshops to present the purpose of the study and the proposed solutions with stakeholders and community members.
D3	2016	Working Partnerships	Coyote Creek Invasive Plant Removal and Revegetation	The project will prepare a plan to remove invasive plants from the Coyote Creek Watershed and re-vegetate areas of the creek with native plants. The project will hire homeless individuals or formerly homeless individuals in transition housing to do the work.	$24,750	$33,000	Closed February 20, 2018	• Identified and completed mapping of invasive plant species in 6 acres of private land along Coyote Creek. • Secured the California Conservation Corps as the employer of record to manage recruitment, selection, and social support for a crew of 10 formerly homeless or disadvantaged youth. • Developed a training and volunteer program, project cost estimate, and schedule to complete the work over a 5-year period. • Performed a biological assessment on the potential impacts of the project.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2016	Children's Discovery Museum of San José	Bill's Backyard: Bridge to Nature	The project will develop a 27,500 square foot outdoor space named Bill's Backyard: Bridge to Nature. It will feature a tree structure to climb up, a hillside to roll down with tunnels to crawl through, a dig pit to shovel in, a dry creek bed to explore that mimics the adjacent Guadalupe River, and areas to build with natural materials like willows, reeds and grasses. Families will also have the chance to see demonstration projects and sustainability solutions up-close, providing xeriscape ideas to consider for use in their own backyards, such as permeable hardscape, drought-tolerant and native plants, rain gardens to retain surface water, water collection systems and solar panels. The project will fund the work for eliminating all grass and plant native plants for increased bio- diversity in the riparian environment and attract beneficial insects, migratory birds, small mammals and even Monarch butterflies.	$142,771	$404,240	Closed January 25, 2021	• Enhanced or restored 0.5 acres/linear feet of area. • Converted 0.5 acres of grass to drought tolerant plants resulting in water savings. • Planted more than 100 native plants, trees, shrubs, grasses and ground covers.
D3	2016	Acterra (transferred to Grassroots Ecology)	Arastradero Creek Watershed Enhancement	The project will install 2,000 linear feet of swale-and-berm structures on contour in the basin feeding Arastradero Creek, and low step structures to raise the groundwater table; and remove invasive plant species along 1,000 linear feet of Arastradero Creek and plant a diversity of native species in their place to increase native vegetation and support wildlife.	$107,561	$217,566	Closed July 21, 2020	• 1,200+ community members engaged through 101 volunteer events. • 2,500 feet of berms and swales created along the contour of a large drainage to slow, spread, and sink stormwater runoff. • 50 young willow trees established along Arastradero Creek. • Decreased invasive plant populations including 4 priority noxious weed species. • Enhanced riparian corridor with thousands of newly installed native plants. • Monitored project activities through vegetation surveys, photo-monitoring, and in-channel geometric surveys.
D3	2016	West Valley College	West Valley College Wildcat Creek Native Vegetation Enhancement	The project will remove approximately two acres of invasive, non-native vegetation within the WVC campus and re-vegetate the area with native species, propagated from a collection of native vegetation planted on campus during past native re-vegetation efforts on campus.	$165,000	$247,707	Closed July 22, 2020	• 500 riparian plantings were installed in fall 2017, and received supplemental irrigation, weeding, maintenance, and monitoring through 2018. • Areas where invasive plant species where removed in 2017 were re- checked and re-treated as needed. Engagement of college administration/faculty to integrate this project into their curriculum. • 72 polygons of invasive plants (approximately 4 acres) were checked in spring and fall 2018 for newly emerging/re-sprouting invasive plants. • Creation of a natural outdoor "classroom" and living laboratory in newly restored creek corridor. • In Spring 2019, a walkthrough of the creek corridor was conducted to locate and map occurrences of invasive species. • Facilitated collaboration and over whelming support from City of Saratoga, neighborhood groups, and volunteers from local community groups and West Valley College students.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2016	Acterra (transferred to Grassroots Ecology)	Byrne Preserve Riparian Enhancement	The project will restore a degraded tributary to Moody Creek located in Byrne Preserve. The project includes community engagement and education, monitoring of vegetation and channel geometry, invasive plant removal, and native plant re-vegetation.	$136,469	$240,056	Closed July 24, 2020	• 800 community members engaged through native plant installation and invasive species removal. • 2,000 feet of creek geometry monitored. • 2,000 feet of creek-side vegetation surveyed. • 12 photo-monitoring surveys to monitor project activities. • 8 noxious invasive plant species prioritized for removal resulting in reduced populations. • Over 1,000 locally sourced native plants spanning 20+ species installed enhancing riparian corridor. • Willow cuttings established along 600 feet resulting in increased canopy cover, sediment deposition, and reduced erosion.
D3	2016	Campus Community Association	Metcalf Ponds Parkway Lakes Steelhead Habitat and Passage Improvement Project	The project will conduct a planning study to evaluate alternatives to improve steelhead trout habitat and passage in the Metcalf Ponds reaches of Coyote Creek by separating the creek from the ponds, revegetating the restored creek with native riparian vegetation, and configuring the channel to optimize its habitat value while preserving the ponds' water management functions of Valley Water.	$31,684	$42,278	Closed July 26, 2018	The final results of the project found that it should be feasible to develop a beneficial restoration design for Coyote Creek and floodplain through the Metcalf Ponds reach, which would allow fish passage, improve ecological and geomorphic function, and contribute to reducing water temperatures, while maintaining the dominant portion of the current percolation capacity.
D3	2016	City of Santa Clara	Ulistac Restoration 2016 Project	The project will improve the Ulistac Natural Area by improving trails and ramp access to the levee, restoring 1.2 acres of riparian habitat along the Guadalupe River and enhancing 1.26 acres of Live Oak Woodland habitat through removal of invasive nonnative plants and trees, planting of native species, and documentation of tree survival. The project is in cooperation with Ulistac Natural Area Restoration & Education Project, Inc. and in partnership with Santa Clara University Department of Environmental Studies and Sciences and Santa Clara Audubon Society.	$165,249	$374,533	Closed April 21, 2021	• Access Improvement – Repaired 280 linear feet of pavement and concrete landings were installed at the base of two levee access ramps. • Trail Connectivity – 370 linear feet of walking trails were connected and improved to prevent erosion. Interpretive sign panels were placed along the walking trails to enhance visitor education. • Riparian Habitat Restoration – Planted 300 native riparian trees and 600 shrubs. • Habitat Enhancement – 55,000 square feet of understory planting was enhanced, including removing exotic trees and non-native plants and planting 230 native plants. • Monitoring and Maintenance – A plant database and GIS map were created for 623 of the new plants. • Community Outreach and Education – Engaged in educational opportunities for San Jose State University, Santa Clara University, various day camps and elementary schools. • Partnerships – Exceeded the matching grant requirement of 6,450 volunteer hours with 11,190 volunteer hours.
D3	2016	Loma Prieta Resource Conservation District	Sycamore Alluvial Woodland Restoration Phase II— Feasibility	The project includes a propagation study designed to test techniques to produce California sycamore seedlings vegetatively for use in a pilot restoration project. Study results will be shared through a high-quality PowerPoint presentation and distributed to all interested parties in the broader restoration and nursery community.	$79,953	$127,705	Completed December 31, 2019	Grantee will submit closeout material in FY22.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2016	City of Mountain View	Permanente Creek Watershed Enhancement Project	The project will involve the removal of trash and non-native invasive plants along 2,350 linear feet of Permanente Creek. 1,000 local watershed plants will be revegetated along the creek providing habitat enhancement for multiple riparian species, special emphasis will be placed on enhancing habitat for two special status species: burrowing owls (foraging habitat) and the San Francisco common yellowthroat (nesting and foraging habitat). The project will provide a unique educational opportunity for the local community, businesses and several educational establishments who will volunteer on this project along with Santa Clara Valley Audubon Society and Acterra.	$43,920	$64,582	Completed December 31, 2019	Grantee will submit closeout material in FY22.
D3	2016	Midpeninsula Regional Open Space District	Hendrys Creek Restoration Project	The project will enhance 3/4 miles of the watershed through removing 14 in-stream structures; invasive plants from 4.44 acres of canyon; and by installing 0.33 acres of watershed specific, contract grown riparian and upload plants along the impacted creek banks and former road; and seeding 1.5 acres with native grasses, acorns and buckeye seeds on the former building pads, and improving the road located along the creek and tributaries.	$484,650	$762,546	In progress	
D3	2016	City of San José	Evergreen Creek Corridor Restoration	The project will correct the poor placement of outlets in the sedimentation basin above the project sites and restore vegetation. The project will focus on removing 6.2 acres of non-native landscape; establishing irrigation and planting native plants along Quimby Creek and Upper Fowler Creek.	$191,041	$502,039	Cancelled	
D3	2018	San Francisco Bay Bird Observatory	Establishing Forster's Tern Nesting Sites Project	The project will use innovative technologies to establish a healthy nesting population of at-risk Forster's Terns in Alviso Pond A16 for the South Bay Salt Pond (SBSP) Restoration Project and Don Edwards San Francisco Bay National Wildlife Refuge. The project will directly impact two acres of island nesting habitat and 240 acres of wetland habitat within Alviso Pond A16, and indirectly impact up to 14,000 acres surrounding the Alviso Pond A16 nesting site through bird foraging behaviors.	$164,000	$218,674	Closed September 4, 2020	• Re-establishment of nesting Forster's terns to Pond A16 with a nest success rate of 60% and 35 nests documented in 2019. • Direct support of two acres of island nesting habitat and 240 acres of wetland habitat within Alviso Pond A16. • In early 2020, SFBBO hosted a public webinar about the Project with 136 attendees. • SFBBO staff presented Project findings at the South Bay Salt Pond Restoration Project's annual stakeholder meeting on January 14, 2020.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2018	Midpeninsula Regional Open Space District	Webb Creek Bridge	The project will construct a new bridge over Webb Creek in Bear Creek Redwoods Open Space Preserve as part of a multi- phased plan to open the preserve for public access. The bridge will open approximately four miles of trails and facilitate a future regional multi-use trail connection between the Lexington Basin and Skyline, as well as ensure emergency service access is possible throughout the preserve.	$149,500	$316,650	Closed June 28, 2021	• Constructed a new bridge over Webb Creek that allows public access to four miles of trails and ensures emergency service access throughout the preserve. • Removed the bridge in one piece to ensure environmental safety. • Installed custom redwood guardrails. • Widened the road to match the width of the abutment wing walls. • Graded and restored the site, which included planting redwood trees and placing redwood mulch around the construction site.
D3	2018	Grassroots Ecology	Adobe Creek Corridor Extension Project	The project will be a partnership between Grassroots Ecology and the City of Los Altos to restore native vegetation along an approximately 500-foot reach of Adobe Creek extending from the southern gate of Redwood Grove Nature Preserve to Mansara Way. The project will include removal of invasive plant species, installation of native understory species with container plantings, maintenance of invasive plant removal and planting zones for four years, and community outreach and education.	$150,753	$236,777.50	In progress	
D3	2018	Grassroots Ecology	Matadero Creek Corridor Project	The project will be a partnership between Grassroots Ecology and the City of Palo Alto to restore native vegetation along a reach of Matadero Creek forming the northeastern boarder of Bol Park. The grant will support a more intensive effort to increase the habitat quality on this creek corridor.	$49,356	$83,918	In progress	
D3	2019	San Jose Conservation Corps	Coyote Creek Vegetative Restoration and Disadvantaged Youth Career Path Project	The project will remove 111,000 sq. feet of invasive plants and replace them with native plants on seven acres of private property along Coyote Creek north of Berryessa Road in San José. The project will restore a native plant assemblage on this section of Coyote Creek and have watershed scale benefits by preventing reinfestation by invasive species of downstream properties for which invasive plant removal has recently been effected by Valley Water.	$389,024	$533,115	In progress	
D3	2018	South Bay Clean Creeks Coalition	Los Gatos Greek Trestle Area Restoration Project	The project will be implemented on a reach of Los Gatos Creek centered on the historic trestle accessible from Lonus Street in the City of San José to restore riparian habitat through the removal of invasive plants and the installation of native vegetation.	$229,923	$462,323	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2018	Santa Clara Valley Habitat Agency	Pacheco Creek Stream and Riparian Restoration Project	The project will involve restoration of riparian and protected species habitat in the Pacheco Creek Reserve. The project will focus on five specific restoration activities; bank stabilization; riparian restoration to filter runoff and control erosion; riparian planting and management; floodplain function restoration and instream structures; as well as management and monitoring. The project will also include preliminary project planning, design and permitting, as well as mapping and wildlife surveys.	$500,000	$1,774,400	In progress	
D3 Mini-Grant	2018	Guadalupe River Park Conservancy	Next Generation Science Standards Curriculum Development and Training	The project will update curriculum to support Next Generation Science Standards that will help emphasize the importance of healthy watershed and support the training of guides to lead field trips for approximately 2,000 K-8 students.	$4,976	$6,634	Closed April 15, 2021	• Prepared and delivered training for Guadalupe Guides (part-time field trip staff) to serve 1,928 students. • 3,405 students participated in 2 field trip programs with BEETLES activities, which were supported through trained field staff. • Aligned river field trip, homeschooling, Boys & Girls curricula and learning stations with NGSS standards that emphasize the importance of a healthy watershed.
D3 Mini-Grant	2018	Living Classroom	Development and Implementation of "Sustainable Soil and Water" Lesson	The project will engage 5th graders in "Sustainable Soil and Water" lessons that will allow them to learn about the local watershed and how they can play a role in protecting the water quality and conserving the quantity.	$5,000	$7,000	Closed April 2019	• Served a total of 125 fifth grade students. • 90% of students surveyed gave the new curriculum a passing or satisfactory response to questions that evaluated their understanding of the lesson objectives. • 100% of the teachers strongly agreed that the lesson met their expectations, objectives, included all necessary materials, and that the lesson delivery was effective and done well in engaging students.
D3 Mini-Grant	2018	Oster Elementary Home & School Club	Oster Elementary School Gardens	The project will increase students' knowledge and awareness of watershed stewardship through the renovation and implementation of a native garden as a living outdoor classroom.	$5,000	$6,250	Closed April 2019	• Volunteers installed drip line irrigation in raised beds and controller setup. • Conducted a total of 3 volunteer workdays, which included a total of 44 total volunteers made up of students and parents. • Garden visits for the 2018-19 school year surpassed garden visits from past years.
D3	2018	City of Morgan Hill	West Little Llagas Creek Interpretive Wildlife Trail Project	The project will construct a two-mile trail that will extend from Watsonville Road south and around the southeastern end of Lake Silveira near Monterey Road and California Avenue. The project will also connect to the existing trail system that runs north, thus creating a continuous, uninterrupted pedestrian and bicycle pathway from the Lake Silveira Park area to Morgan Hill's downtown core. Trail users will have access to a unique interpretive experience of local wildlife and wetlands.	$200,000	$998,800	In progress	
D3	2018	West Valley College	West Valley College Vasona Creek Trail Phase 2	The project will complete the design and construction of Phase 2 of the Vasona Creek Trail providing access to more than 20 acres of recently restored riparian corridor on the West Valley College campus.	$221,500	$655,214	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2018	Grassroots Ecology	Grassroots Ecology College Internship Program	The project will educate and train college students to restore open spaces and creeks through a combination of field work, interpretive hikes, independent study, and capstone projects. The interns will work on restoration projects throughout thecounty watersheds and also learn about fish passage issues.	$5,000	$34,360	Closed August 30, 2018	The 8 interns taking part in the program achieved the following results: • 150 total learning hours. • 50 hours of invasive plant removal and native plant care • 8 hours of channel surveying. • 5 hours of vegetation monitoring. • 3 hours of water quality monitoring • Enhancement of 7 Santa Clara County open space sites.
D3 Mini-Grant	2018	Bay Area Older Adults	Watersheds & Wildlife Education Project	The project will engage older adults (50 yrs+) in watershed stewardship by: 1. Volunteering to remove invasive plants in the areas of Don Edwards Wildlife Refuge to improve the habitat in the marshlands. 2. Lead 4.5 mile walks at Rancho San Antonio Open Space Preserve to educate and engage participants about flood protection. 3. Lead 3-mile walk along Uvas Creek to educate participants about wildlife preservation in the creek and reservoirs.	$5,000	$6,650	Closed December 11, 2018	• Majority of the 77 participants rated the program as "Extremely Satisfied" or "Very Satisfied." • 97% of the participants said their knowledge about the watershed and/or wildlife project was improved by the program. • 100% of those surveyed answered the educational multiple-choice watershed and wildlife question correctly.
D3 Mini-Grant	2018	Stanford Conservation Program	Matadero Creek Cape Ivy Removal	The project will remove cape ivy that was introduced to California in the 1950s and have since displaced native plants in the area. If it isn't removed it can cause serious soil erosion problems on the hillside. Grassroots Ecology will be supporting the efforts.	$5,000	$10,400	Closed February 23, 2021	• Removal of over 5,000 sq. ft. covered in cape ivy along San Francisquito Creek. • 4 botanical surveys to monitor plant communities and assess re-growth of cape ivy. • Both the Stanford Conservation Program and Grassroots Ecology described their cape ivy removal efforts in an e-newsletter that reaches over 4,000 community members.
D3 Mini-Grant	2018	Stanford Conservation Program	Riparian Tree Planting to Expand Canopy Cover in Stream Supporting CA Red- legged Frog	The project will enhance creek and bay ecosystems by planting and maintaining 25 native trees in the easement. The project will also evaluate the presence of California red-legged frog populations.	$5,000	$12,375	Closed February 23, 2021	• 100% survivorship of planted trees. • Over 10 volunteer events hosted from May 2018 through May 2020. • During volunteer work events, trees were watered, weeded, and protective structures (tubex, rebar, wire mesh) were maintained.
D3 Mini-Grant	2018	Stanford Conservation Program	Restoring Native Understory Plant Community in support of biodiversity, improved water quality, and California tiger salamanders	The project will plant 100 understory riparian plants to support the California tiger salamander on Stanford land.	$5,000	$13,000	Closed February 23, 2021	• Approximately 250 volunteers participated. • 100 understory shrubs watered and tended by volunteers. • Hosted approximately 10 volunteer events from May 2018-2020, which included an environmental education component. • Monitored water quality and quantity in ephemeral wetlands downslope of the project site on 10 occasions from May 2018-2020. • Monitored California tiger salamander eggs, larvae, juveniles, and adults; 345 unique California tiger salamander juveniles and adults wereidentified from May 2018-2020. • Created an educational opportunity for community members focused on native plant restoration.
D3 Mini-Grant	2018	Stanford Conservation Program	Native Hedgerow Planting as Fencing Alternative and Restoration Product in Permanent Conservation Easement	The project will plant and maintain 382 native shrubs in a hedgerow that will help restore the Deer Creek conservation easement which has been damaged by human impact over the years.	$5,000	$24,870	Closed February 9, 2021	• Over 450 volunteers participated in planting and maintaining the native hedgerows. • Approximately 382 native shrubs in a hedgerow were established and nurtured.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2018	Veggielution	Eastside Explorers Watershed Curriculum	The project will take youth from East Side San Jose on field trips to educate them about the close relationship between the environment and their local food system. The activities they conduct are centered around collaborative group tasks focused on urban agriculture, nutrition, human impacts, and ecological interconnections. The project will increase community awareness and understanding of watershed stewardship by incorporating a watershed-specific component into their middle school field trip program curriculum.	$5,000	$7,650	Closed January 22, 2021	• Developed a watershed education curriculum and outreached to schools in the community. Students were encouraged to return with their families to participate in Veggielution programs. • After participating in the curriculum, students exhibited increased interest in farm activities and an appreciation of the benefits provided by a healthy watershed to the environment and surrounding community. • Post-visit survey data showed that, before the field trips, over two-thirds of the visiting students were unaware of the importance of a watershed or how it affected our community. Upon completion of the field trip, 92% of students were able to effectively describe a watershed in their own words and 59% were able to describe a watershed more in-depth with a combination of terms such as drainage, landarea, multiple water sources, and environment.
D3 Mini-Grant	2018	Living Classroom	Hoover and Nixon School Native Ecology Garden- Based Lessons	The project will restore the school's native garden to be used as an outdoor classroom that will deliver watershed stewardship curriculum to over 400 students from grades K–5.	$5,000	$8,000	Closed June 11, 2021	• Students met the lesson objectives with 83% accuracy. • A total of 24 lessons were provided to approximately 400 students.
D3 Mini-Grant	2018	Grassroots Ecology	Nursery Phytosanitation Education and Equipment Upgrade	The project will upgrade phytisanitary tables to support the growth of native plants and allow the hosting of two educational nursery tours for professionals and garden groups to teach them about how to integrate the latest Best Management Practices for phytosanitation.	$3,000	$11,332	Closed July 21, 2020	• 12 new tables put into service at the nursery. • Hosted 2 educational tours at the nursery to 2 different groups.
D3 Mini-Grant	2018	Trout Unlimited	Little Arthur Creek Streamflow Stewardship Phase 2 Planning Project	The project will plan for phase 2 of an existing project "Little Arthur Creek Streamflow" to improve streamflow by implementing "storage and forbearance" technique. Storage tanks will be provided to landowners who would agree to divert their water during wet season and cease all diversion during dry season.	$5,000	$7,960	Closed June 30, 2020	• Completed legal analysis of public water rights, parcel records searches, and outreach to individual landowners on Redwood Retreat Road. • Identified existing ponds and reservoirs within the Little Arthur Creek watershed using aerial imagery, calculated effective storage capacities, and estimated the streamflow enhancement potentials from hypothetical flow releases from each of the available storage reservoirs. • Discovered that the magnitude of streamflow enhancement possible from pond flow releases is more efficient than the proposed residential storage and forbearance approach. • Initial work from this project being used to discuss more potential flow releases with Santa Clara County Parks and additional private landowners.
D3 Mini-Grant	2018	Living Classroom	Capri School Native Garden	The project will restore the school's native garden to be used as an outdoor classroom that will deliver watershed stewardship curriculum to over 400 students from grades K–3.	$5,000	$8,000	Closed May 10, 2021	• Provided 19 ecology focused lessons on habitats, ecology, pollution, and California's biodiversity to approximately 300 students in grades K-3. • Created approximately 1,600 square foot native habitat garden. • Purchased and planted approximately 65 additional native plants (1-gallon size) representing 35 species. • Created and installed 35 plant identification signs with a few sentences each to inform students. • Grew 80 native plants from cuttings in the greenhouse and seed to supply native plants to other CUSD school native gardens.
D3	2018	Friends of Stevens Creek Trail	Stevens Creek Steelhead Passage Improvement Project	The project will provide construction of instream features at the Deep Cliff Golf Course on Stevens Creek in Cupertino to facilitate juvenile steelhead trout upstream passage (design, permit, construction).	$120,000	$176,850	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2018	San Francisco Bay Bird Observatory	Waterbird Monitoring in Santa Clara Salt Ponds	The project will expand on work connecting the community to the native birds in the bay through the Colonial Waterbird Program, a citizen science program that monitors nesting colonies of waterbirds within the South SF Bay to document overall population trends and responses to restoration.	$5,000	$12,280	Closed October 30, 2019	• Submitted 2 reports to Restoration Project managers that assembled targets for waterbirds and outlined recommendations for waterbird monitoring. • In partnership with the U.S. Geological Survey and the U.S. Fish and Wildlife Service, surveyed all South Bay Salt Pond restoration sites and accessed tidal marsh areas to document breeding waterbirds. The U.S. Geological Survey's report will be provided to Restoration Project managers. • Engaged thousands of community members with waterbird conservation.
D3 Mini-Grant	2018	Keep Coyote Creek Beautiful	Santa Clara Park BioBlitz Events	The project will engage community members through a BioBlitz event to act as citizen scientists where they explore the natural environment of plants, wildlife, and aquatic species. A part of the educational process, attendees will participate in activities that will connect them to better understanding how to protect the waterways by keeping the environment healthy.	$5,000	$13,500	Closed October 30, 2019	Hosted 3 BioBlitz events, where 194 participants of all ages and abilities came together to identify and learn about the natural environment, including plants, bugs, and birds.
D3 Mini-Grant	2018	Smart Yards Education Foundation	Earth Day Water Community Awareness	The project will partner with students and faculty from SJSU & local community colleges to teach watershed stewardship in schools in low-income neighborhoods. Students will receive hands on learning activities that will demonstrate water and soil conservation, support to identify conservation subsidies, and learn other techniques to improve the community through watershed activities.	$5,000	$7,000	Closed September 2018	• Presented a total of 2 workshops. • 58 individuals attended the event, including elected officials, Smart Yards Education Board of Directors, local community leaders, environmentalists, landscapers, students and clergy. • Post event survey indicated that over 80% of the participants were very satisfied with the event.
D3 Mini-Grant	2018	San Francisco Bay Bird Observatory	California Gull Predator Surveys	The project will give local residents the opportunity to learn about and explore their local watersheds as well as disseminate this knowledge to their friends and families by having them participate in a surveying effort to count and document nesting California Gulls.	$3,000	$5,048	Closed September 2018	• Provided in depth training to 19 volunteers to work with staff to count and document nesting California Gulls. • Worked with 19 volunteers to monitor and complete the surveys of 10 California Gull colonies in the South San Francisco Bay. • Entered collected data from California Gull surveys into a long-term database to produce a report of the results of nesting surveys for US Fish & Wildlife Service, South Bay Salt Pond Restoration Project, and Valley Water.
D3 Mini-Grant	2018	Living Classroom	Creating Native Habitats in Schoolyards: Crittenden Middle School	The project will work with Crittenden Middle School in Mountain View to restore a native plant garden to help engage and educate students, teachers, parents, and the public about local native plants. The garden will be used as an outdoor learning classroom for teachers. The project will also provide lessons to middle school students on California's Biodiversity and Adaptation of California Native Plants that will likely reach nearly 400 students.	$5,000	$7,000	Completed May 2018	
D3 Mini-Grant	2018	Living Classroom	El Carmelo School Native Ecology Garden-Based Lessons	The project will restore the school's native garden to be used as an outdoor classroom that will deliver watershed stewardship curriculum to over 400 students from grades K–5.	$5,000	$8,000	Completed May 2019	• Students met the lesson objectives with 84% accuracy (goal was 70%). • Provided a total of 22 lessons to approximately 400 students.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2018	Living Classroom	Castlemont Elementary School Native Garden	The project will restore the school's native garden to be used as an outdoor classroom that will deliver watershed stewardship curriculum to over 400 students from grades K–3.	$5,000	$8,000	In progress	
D3 Mini-Grant	2018	Citizens for Environmental and Economic Justice (CEEJ)	East San Jose: Overfelt Gardens Park Community Project	The project will engage students from SJSU to develop a pollinator native garden, document and map out non-native species using GPS technology, remove those non-native species, and pick up litter in Overfelt Gardens Park. The project will also develop new K-12 curricular to help increase awareness on local habitat in the area and support educational activities at the garden.	$5,000	$15,360	In progress	
D3	2019	City of Milpitas	Milpitas Lower Penitencia Creek Pedestrian Bridge Project	The project will provide for design and construction of a pedestrian bridge across the Penitencia East Channel between McCandless Drive and Montague Expressway. The new pedestrian bridge will connect residential developments, the Penitencia Creek multi-use trail, future McCandless Park, and the recently completed Mabel Mattos Elementary School.	$60,000	$1,865,000	Agreement execution in progress	
D3	2019	Midpeninsula Regional Open Space District	Beatty Trail Connection	The project will create new trail and public access at the Beatty property of the Sierra Azul Open Space Preserve (OSP) through new parking area and trail connection. The trail will provide new access to regional trails, including the Bay Area Ridge Trail (Ridge Trail) and Juan Bautista de Anza National Historic Trail, while also providing new creekside trail access.	$149,906	$514,351	Agreement execution in progress	
D3 Mini-Grant	2019	Irvington High School	Sustainable California Initiative Project	The project will provide funding to develop a watershed stewardship curriculum that will then be presented to approximately 10 high schools and 15 Boy Scout troops in Santa Clara County. The project will also create posters and artwork that will be displayed at local creeks, trails and parks with an emphasis on the benefits of preserving the watersheds, as well as cleanups at the Don Edwards Wildlife Refuge, Ed Levin County Park, and Berryessa Creek Park.	$3,230.54	N/A	Cancelled	
D3 Mini-Grant	2019	Science from Scientists, Inc.	ECOAdventures Vacation Camp	The project will implement two five-day camps for 50 youths from the ages of 11 to 14 with a focus on STEM learning around our ecology, including our local watersheds.	$5,000	N/A	Cancelled	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3	2019	Santa Clara County Office of Education (Partnership)	Environmental Education and Student Assessment Project	The project will support the expansion of SCCOE's Education Outreach Program and environmental education programming to reach more students, specifically in school districts that lack the resources and opportunities to implement environmental education in their classrooms.	$50,000	$175,000	In progress	
D3 Mini-Grant	2019	Bay Area Older Adults	Watersheds & Wildlife Education Walks	The project will provide outdoor educational programs for older adults age 50+ to experience Valley Water watersheds first-hand as well as teaching them about protecting local watersheds and dependent ecosystems. Project areas include Don Edwards Wildlife Refuge (San Jose), Ulistac Nature Area (Santa Clara), Guadalupe River Park (San Jose), Alum Rock Park (San Jose) and McClellan Ranch Preserve (Cupertino). The educational program is focused on hands-on learning which has been shown to be more effective than learning in a classroom.	$5,000	$14,448	Closed July 24, 2020	• 5 programs were delivered to a total of 132 participants. • Post-survey results indicated that more than 90% of participants reported they learned something new about the watersheds and wildlife from the above areas. More than 72% of participants were "very satisfied" with the program. • All programs were promoted with a monthly full-page print ad in a senior magazine that was distributed to over 30,000 readers throughout Santa Clara County. • Valley Water-focused outreach materials were produced and distributed to program participants and the Valley Water logo was added to BAOA's webpages as a partnered agency.
D3 Mini-Grant	2019	Bay Area Older Adults	Watershed Appreciation Program	The project will provide four outdoor educational programs for blind older adults so they can experience Valley Water watersheds first-hand and to teach them about the Guadalupe watersheds and dependent ecosystems. The project will bring blind older adults to four waterways in four different watersheds - Los Alamitos Creek and Guadalupe Slough (Guadalupe Watershed), Stevens Creek (Lower Peninsula Watershed) and Penitencia Creek (Upper Penitencia Creek Watershed).	$5,000	$7,590	Closed June 26, 2020	• Participants increased their knowledge of the 4 watersheds located at the following locations: Los Alamitos Creek, Guadalupe Slough, Stevens Creek and Penitencia Creek. • Pre- and post-walk surveys indicated an increase in participant knowledge of the creeks from an average of 0-22% to 78-100%, respectively. • Educational materials, such as plans and guides, were created that incorporated the senses of touch, smell, hearing and taste.

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2019	Grassroots Ecology	Peninsula/South Bay Watershed Forum	The project will increase community awareness and understanding of watershed stewardship by convening Peninsula and South Bay community members, agencies, and organizations working on watershed-related issues to connect with one another, share information, and advance policies and best practices that promote watershed health.	$5,000	$9,370	Completed April 2021	• 5 Watershed Forum meetings held with 210 participants. • 16 guest speakers engaged. • 253-member listserv maintained Experts from different agencies and nonprofit groups shared information on topics including: Measure AA and the Bay Restoration Authority, South Bay Salt Ponds Restoration, Diversity in Local Environmental Leadership, Future Planning and Actions in Local Watersheds, and Anadromous Fish and FAHCE.
D3 Mini-Grant	2019	Living Classroom	Equity in Environmental Literacy	The project will involve planning and supervising community building workdays to engage community members in planting native tree and under story plants, and interpretive signs; to create wildlife habitat; educate the participants and future visitors regarding the value of native plants in helping to restore our native ecology; and create more beautiful and inviting outdoor gathering places for the local community.	$5,000	$32,000	Completed December 2020	Due to COVID-19, Living Classroom could not carry out the original scope of work with in-person workday lessons. The funding was instead used to create a new native and edible garden at Jose Vargas School. Key outcomes include: • Removed of topsoil and mulch. • Installed irrigation in a new native garden. • Removed existing shrubs and replanting them on the campus. • Planted 30 native plants. • Built two 8′ x 4′ x 24″ redwood beds with vegetable blend soil added to each box. • Installed "stub ups" for future irrigation in the new beds and for suture beds 9a total of 10 beds are needed to accommodate the student enrollment at Vargas).
D3	2019	City of Morgan Hill	Madrone Channel Trail Improvements Project	The project will be the first phase of a two-phase project to pave an existing unpaved trail that is located on a maintenance road adjacent to the east side of Valley Water's Madrone Channel. The 2.3-mile trail runs north along the eastside of Highway 101 from Tennent Avenue to Cochrane Road. The first phase is approximately 1.1 miles.	$120,000	$401,958	In progress	
D3	2020	Santa Clara Open Space Authority	Pond Restoration Project for California Red-legged Frog and Western Pond Turtle in Rancho Canada del Oro Open Space Preserve	The project will directly improve habitat for two special status species within Rancho Canada del Oro Open Space Preserve (Preserve) in Santa Clara County: California red-legged frogs (CRLF), western pond turtles (WPT). The project will be focused on conserving existing populations, increasing the number of individuals, and expanding the overall distribution of populations of these species in biologically appropriate locations to maintain viable populations and contribute to the regional recovery of these species. The project outcomes will be achieved through critical pond redesign, invasive plant removal, and native vegetation restoration. The project will build a network of ponds to provide vital habitat for CRLFs and WPTs and provide linkage to the ring of protected lands surrounding the Preserve.	$476,796	$704,548	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2020	Living Classroom	Campbell Union Elementary School District	The project will implement outdoor instruction and student experiential learning at six schools in the Campbell Union Elementary School District (CUSD) through a native ecology lesson portfolio . The lessons taught at these schools will focus on learning topics including ecology, sensory observation, pollination, water conservation, plant biodiversity and its relationship to wildlife diversity and abundance, healthy soil, and how all of this relates to a healthy watershed. Three of the six schools have native habitat gardens in place; one will be completed by summer's end; and two schools (Sherman Oaks and Forest Hill) have plans to install gardens in the near future.	$5,000	$8,000	Agreement execution in progress	
D3 Mini-Grant	2020	Youth Outside	2019 Outdoor Educators Institute	The project will support 18-24 year-old Bay Area residents interested in pursuing a career in outdoor education through an immersive training program on evenings and weekends over a three-month period. OEI ensures that young adults who've historically faced social, economic, and cultural barriers to accessing the outdoors are reconnected to the natural world through training, skills-building, and experiences critical to their continued growth as leaders in the environmental field.	$5,000	$50,000	Agreement execution in progress	
D3 Mini-Grant	2020	Bay Area Older Adults	Watershed Appreciation Program	The project will provide four outdoor educational programs for visually impaired older adults (VIPs) to experience Valley Water watersheds first-hand, as well as teach them about the protecting our watersheds and dependent ecosystems, and related projects. The project will customize the program for this underserved population; provide transportation from the Vista Center for the Blind, healthy lunches, four blind-trained guides; creation of four-sense focused watershed interpretation; and create surveys to analyze what participants learned from each program.	$5,000	$12,627.14	Agreement execution in progress	
D3 Mini-Grant	2020	Guadalupe River Park Conservancy	Guadalupe Watershed Ecosystem Education Project	The project will provide programming and transportation scholarships to bring Title One schools to Guadalupe River Park and Gardens. At least forty percent of a school's registered students must be eligible for Free or Reduced Price Meal (FRPM) in order to qualify for any GRPC scholarship.	$4,725	$6,433	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2020	Children's Discovery Museum of San Jose	Project Transect Alamitos Creek	The project will enhance the Children's Discovery Museum of San Jose's existing BioSITE (Students Investigating Their Environment) environmental education program for the 4th grade students from Graystone and Williams Elementary Schools and their Leland High School student mentors with a pilot program to use "transects" to conduct biological monitoring of the biodiversity of the important and rich riparian environment at three collection sites along Alamitos Creek. The award-winning BioSITE curriculum, which uses local watersheds as outdoor classrooms, has traditionally focused on just the river or creek itself, and this pilot offering will expand the educational scope to include investigating change over time with the flora while also measuring impacts of human activity.	$5,000	$197,712	Agreement execution in progress	
D3 Mini-Grant	2020	Grassroots Ecology	Embarcadero Road Habitat Corridor	The project will be a partnership between Grassroots Ecology and landscape architect Juanita Salisbury, the City of Palo Alto and the San Jose Conservation Corps. Two pollinator gardens will be created along Embarcadero Road by converting the existing space into a watershed-friendly habitat, which will attract pollinators, such as bees and butterflies. The project will provide a hands-on workshop to the San Jose Conservation Corps as they remove the ivy and mulch from the existing area. The workshop provides training to at least 20 community members and teaches the concept of habitat gardening and installation of native vegetation. Signage will help interpret the garden flora and fauna and the garden's watershed benefits and be visible to 25,000 passersby that travel the road daily. First Congregational Church members, neighbors and other community volunteers will provide and maintenance into the future.	$5,000	14,500	In progress	
D3 Mini-Grant	2020	San Jose State University Research Foundation	KCCB BioBlitz and Connection to Nature	The project will implement a research component of the BioBlitz events to provide valuable data and analysis on how such events contribute to participant sense of connection to nature. Practical consequences of feeling connected to nature manifest themselves in ways such as pro-environmental attitudes and behaviors that impact citizen support for natural resource protection and management.	$5,000	$8,250	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2020	Marshmallow Minds	Environmental STE(A)M Education on Conservation of Birds	The project will create environment-focused STEAM education modules on bird conservation and their habitat, as well as field learning activities, in collaboration with the San Francisco Bay Bird Observatory (SFBBO) for students in grades K-8.	$5,000	$46,000	In progress	
D3 Mini-Grant	2020	Alliance for Water Efficiency	Sustainable California Initiative Project	The project will provide funding to develop a watershed stewardship curriculum that will then be presented to approximately 10 high schools and 15 Boy Scout troops in Santa Clara County. The project will also create posters and artwork that will be displayed at local creeks, trails and parks with an emphasis on the benefits of preserving the watersheds, as well as cleanups at the Don Edwards Wildlife Refuge, Ed Levin County Park, and Berryessa Creek Park.	$3,230.54	$4,310.50	Cancelled	
D3	2020	Grassroots Ecology	Re-Oaking Silicon Valley	The project will expand the climate resiliency of the region by growing, planting and establishing hundreds of oaks, willows, buckeyes and other native trees across public open spaces and parks in Palo Alto, Los Altos Hills and Cupertino, as well as providing native trees and plants through outreach programs in Sunnyvale and Santa Clara, where development has displaced the historic native tree canopy. The project will provide education and service-learning opportunities to hundreds of people in Santa Clara County and will expand the awareness of the importance of native oaks in improving the region's ecosystem and watershed health.	$103,735	$351,685	In progress	
D3 Mini-Grant	2020	Baker Home and School Club	Outdoor Classroom and Garden	The project will create an educational, productive and imaginative space at Baker Elementary School with an outdoor classroom, native plant garden, vegetable/herb/fruit garden. This newly created space in a large dirt area will result in an inviting and welcoming area for students. Students will feel a sense of ownership and accomplishment as they get their hands dirty, watch things grow, create experiments, and harvest from a beautiful outdoor garden.	$5,000	$20,680	In progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2020	Bay Area Older Adults	Watershed and Wildlife Education Program	The project will increase access for 50 seniors ages 60+ to outdoor educational experiences. The grantee will continue with it's annual volunteer restoration event at Don Edwards San Francisco Bay National Wildlife Refuge, and add four new outdoor educational programs about Valley Water's watersheds in 2020. Project locations include Don Edwards Wildlife Refuge, Anderson Lake County Park, Vasona Lake County Park and Shoreline Lake Park.	$5,000	$15,876.06	In progress	
D3 Mini-Grant	2020	Elizabeth F. Gamble Garden	Watershed Garden	The project will convert a quarter acre of turf grass into a prominent new garden on the corner of Embarcadero and Waverley Street in Palo Alto that will demonstrate the watershed approach to landscaping. The transformation will provide enhancements to the properties, neighborhoods and cities. It will demonstrate sustainable garden design principles including building healthy soil, keeping rain on the properties, using permeable paving, selecting climate-appropriate plants and lawn alternatives that also provide habitat to wildlife and managing supplemental irrigation.	$5,000	$99,150	In progress	
D3 Mini-Grant	2020	San Jose State University Research Foundation	Watershed Stewardship Awareness Educational Workshop Series	The project will conduct a series of educational workshops with the goal of creating awareness of watershed stewardship. conducted at San Jose State University and the participants will be students in the Department of Civil and Environmental Engineering, and other students of San Jose State who are interested in learning about watershed stewardship.	$5,000	$6,250	In progress	
D3	2021	Community Express	La Sendera Community Art Trail	The project will paint murals and place other art installations on community owned sound walls and private fences that line the two-mile trail. The project will host outdoor events in partnership with local businesses and schools to engage the community.	$25,530	$50,000	Agreement execution in progress	
D3 Mini-Grant	2021	Keep Coyote Creek Beautiful	Hellyer County Park Mural	The project will create a mural at Hellyer County Park in San Jose, CA. The mural design and implementation process includes: 1) Meeting with Santa Clara County Park management to create a full scope of work and budget; 2) Obtain community input to render a mural draft design and approve the design via in-person activities and surveys; 3) Preparing and painting the mural. The mural will bring awareness to the neighboring Coyote Creek and park visitors will learn about the flora and fauna that co-exist along the creek.	$5,000	$12,450	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2021	Keep Coyote Creek Beautiful	Empire Gardens Elementary School Mural	The project will create a mural at Empire Gardens Elementary School in San Jose, CA. The mural design and implementation process includes: 1) Meeting with the facility management to create a full scope of work and budget; 2) Refining community input to render a mural draft design and approve the design; 3) Preparing and painting the mural. The mural will bring awareness to the neighboring Coyote Creek, and the students and visitors will learn about the birds, bugs, fish, trees and other wildlife that live in and around the creek.	$5,000	$13,380	Agreement execution in progress	
D3 Mini-Grant	2021	Bay Area Ridge Trail Council	Ridge Trail Berryessa BioBlitz	The project will encourage residents to go out into their neighborhood parks and learn about the local environment around them. The event will be facilitated by Bay Area Ridge Trail staff, a local naturalist, and project partners. The training sessions will guide participants on how to examine and explore local flora/fauna using the iNaturalist App.	$5,000	$7,500	Agreement execution in progress	
D3 Mini-Grant	2021	Bay Area Older Adults	Watershed Appreciation Program	The project expands Bay Area Older Adults' Watershed Appreciation Program (project) to four additional Santa Clara County watersheds: Los Gatos Creek County Park, Joseph D. Grant and Grant Lake, Uvas Canyon County Park and Coyote Creek Ogier Ponds. The Project features both live and remote educational programs and promotion of recorded versions of the same programs to the visually impaired population of Santa Clara County.	$5,000	$16,680	Agreement execution in progress	
D3 Mini-Grant	2021	Bay Area Older Adults	Watershed Walk & Talk Program	The project will increase access of adults (age 60+) to Santa Clara County's watersheds while raising participant awareness and understanding of how healthy watersheds are critical to their well-being and that of the natural world around them. For 2021, the project will include four new in-person outdoor educational programs located within the Valley Water watersheds. The in-person programs will enable older adults, who do not usually have access to these watersheds, to experience them first-hand.	$5,000	$17,830	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3 Mini-Grant	2021	City of Santa Clara	Green Infrastructure and Water-wise Native Plant Demonstration Garden Design	The project will be an assessment to install an integrated project that will provide water quality improvement, water conservation benefit, enhance community understanding and promote inter-departmental engagement on green stormwater infrastructure (GSI) retrofit. Once implemented, it will pave the way for future GSI projects, engage the public and strengthen interdepartmental and interagency collaboration.	$5,000	$8,000	Agreement execution in progress	
D3 Mini-Grant	2021	City of Santa Clara	Adopt-a-Spot Tool Lending Program	The project will provide community groups, businesses, and individuals an opportunity to play an active role in keeping public spaces clean and beautiful by lending them the necessary resources and tools to conduct a successful cleanup, with the flexibility to set their own schedule. Participants will be able to adopt a space in the public right-of-way, such as gutter lines and sidewalks, creek trails (with Valley Water approval), neighborhood blocks, City-owned lots or alleys, storm drain inlets, and bus stops.	$5,000	$12,974	Agreement execution in progress	
D3 Mini-Grant	2021	City of Santa Clara	San Tomas Aquino Creek Trail Pet Waste Station and Public Litter Container Expansion Project	The project will include the installation, outreach and ongoing maintenance of two additional public litter containers, each accompanied by a new pet waste bag station and full-color, weather resistant pollution prevention sign; and three additional pet waste bag stations and signage installed near existing public litter containers along the trail (total project installation of two public litter containers, five pet waste bag stations and five pollution prevention signs). The signage will include a QR code with a link to the City's Stormwater Pollution Prevention webpage which includes useful information and links for residents to learn more about the hazards of stormwater pollution and their role in reducing this threat. The project will also include social media outreach messaging to promote the use of the new trail installations and connect users to resources to further educate the public.	$5,000	$8,760	Agreement execution in progress	
D3 Mini-Grant	2021	Gilroy After Hours Rotary Club	Gilroy Watershed Clean Up	The project will include two watershed clean up events. Each event will be held on a Saturday morning. Events will target two areas of the city that have significant clean up challenges due to urban infrastructure and aging neighborhoods. Each event is expected to attract approximately 50 volunteers and collect 3-4 six-yard dumpsters along with recycling products.	$5,000	$6,667	Agreement execution in progress	

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/ Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
D3Mini-Grant	2021	President and Board of Trustees of Santa Clara College	The Water Project	The Water Project, a collaboratively created multi-media performance work, will raise awareness and promote engagement surrounding 21st century water issues, including those pertinent to regional watersheds and systems. Consulting water scientists confirm the need to complement hard data with artistic endeavors such as The Water Project to engage the public and motivate action. For this reason, The Water Project intends to be part of the conversation.	$5,000	$27,460	Agreement execution in progress	
D3 Mini-Grant	2021	SCIENCE IS ELEMENTARY INC	SiE Books Creek Cleanup	The project will address educational challenges that were highlighted during the COVID-19 pandemic: limited internet connectivity, lack of high-quality materials for remote hands-on science instruction, and a broadening of the achievement gap for students of color and those from low-income families. SiE Books are line-drawing illustrated short books that allow young kids (5-7 years of age) to do hands-on science experiments on their own and require little to no reading. The adult companion will contain information on watershed stewardship and cleanup, and will include recommendations for participating in creek clean-ups as a family.	$5,000	$100,000	Agreement execution in progress	
D3 Mini-Grant	2021	Latimer Home and School Club	Latimer Garden & Outdoor Classroom	The project will transform an unused section of Latimer School campus into a school garden and outdoor classroom for 550 students. The garden, which will attract a diversity of wildlife, will include themed garden beds for varying plants such as natives, pollinator- friendly, scented, and tactile. Outdoor classroom elements will also be installed, including picnic tables, a sink that uses greywater, a whiteboard, compost bins, a large garden shed and educational signage. Teachers at Latimer will use the garden and outdoor classroom to teach the students about local watershed stewardship, wildlife habitat, water conservation, garden education and other ecological concepts.	$4,959	$39,942	In progress	
Total					$7,910,789	$19,174,457		

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Safe, Clean Water and Natural Flood Protection Program
Appendix D: Capital Projects Jurisdictional Complexities (Confidence Levels Regarding Outside Agencies) Fiscal Year 2019–2020

Partners and Outside Agencies	A3 Pipeline Reliability Project	C1 Anderson Dam Seismic Retrofit	D4 Fish Habitat and Passage Improvement		D6 Creek Restoration and Stabilization			E4 Upper Penitencia Creek Flood Protection	E5 San Francisquito Creek Flood Protection	E6 Upper Llagas Creek Flood Protection	E7 San Francisco Bay Shoreline Study		E8 Upper Guadalupe River Flood Protection		Permanente Creek Flood Protection	Sunnyvale East/West Channels Flood Protection	Coyote Creek Flood Protection
			Site 1: Almaden Lake	Site 2: Ogier Ponds	Site 1: Hale Creek	Site 2: Bolsa Road	Site 3: Los Gatos		Upstream of 101		EIAs 1-10	EIA 11	Reach 6	Reaches 7-12			
Funding																	
U.S. Army Corps of Engineers (Funding)								M	L		M	H		L			
State Grants								M	L								M
San Francisco Bay Restoration Authority (Measure AA)									L			H					
Other									L	L	M						M
Regulatory Permitting																	
U.S. Army Corps of Engineers (Permits)		M			H	H		H	M	H			M	M	H	M	M
California Department of Fish and Wildlife	M	M			H	H		H	M	H			M	M	H	M	M
California Department of Industrial Relations/CA Occupational Safety		M															
Department of Water Resources Division of Safety Dams		M															
Federal Energy Regulatory Commission		M															
National Marine Fisheries Service		M				H		H	M	H			M	M		M	M
San Francisco Bay Regional Water Quality Control Board	M	M			H			H	M			M	M	M	H	M	M
Central Coast Regional Water Quality Control Board						H				H							
San Francisco Bay Conservation and Development Commission												M				M	
United States Fish and Wildlife Service		M				H		H	M	H			M	M	H	M	M
Valley Habitat Plan	M	M				H		H									M
Cities																	
Cupertino	H														H		
East Palo Alto									H								
Gilroy																	
Los Altos					M	H									H		
Menlo Park									H								

Note: H– high, M– moderate, L– low
Refer to page 2 for more information on confidence level definitions.

Partners and Outside Agencies	A3 Pipeline Reliability Project	C1 Anderson Dam Seismic Retrofit	D4 Fish Habitat and Passage Improvement		D6 Creek Restoration and Stabilization			E4 Upper Penitencia Creek Flood Protection	E5 San Francisquito Creek Flood Protection	E6 Upper Llagas Creek Flood Protection	E7 San Francisco Bay Shoreline Study		E8 Upper Guadalupe River Flood Protection		Permanente Creek Flood Protection	Sunnyvale East/West Channels Flood Protection	Coyote Creek Flood Protection
			Site 1: Almaden Lake	Site 2: Ogier Ponds	Site 1: Hale Creek	Site 2: Bolsa Road	Site 3: Los Gatos		Upstream of 101		EIAs 1-10	EIA 11	Reach 6	Reaches 7-12			
Milpitas																	
Morgan Hill		M								H							
Mountain View					M						M				H		
Palo Alto									H		M						
San José	H		H					M				M	H	M			M
Saratoga	H																
Sunnyvale											M					H	
Counties																	
Santa Clara County	H	M		M				M	H	H	M	M			H	H	M
San Mateo County									H								
Other Agencies																	
California Department of Transportation (Caltrans)									H	M				M		H	
California State Coastal Conservancy											M						
Gate of Heaven Cemetery (Diocese of San José)															H		
Department of Water Resources	H								H	M							
Federal Emergency Management Agency									M	M						M	
Peninsula Corridor Joint Power Boards (Caltrain)														M			
Midpeninsula Regional Open Space District											M				H		
NASA Moffett Field											M						
PG&E	M	M			M			M	M	M				L	H	H	
San Francisquito Creek Joint Powers Authority									H		M						
San Mateo County Flood Control District									H								
Union Pacific Railroad	L									M		L		L	H		
State Office of Historical Preservation		M				H									H		
Santa Clara Valley Transportation Authority (VTA)	M							M									

Note: H– high, M– moderate, L– low
Note: Empty cells are not applicable to that project.
Refer to page 2 for more information on confidence level definitions.

Appendix E: Cumulative Trash Removal Data for Projects B1-B4, B6 and B7

E-1: Estimated volume of trash removed by project for Projects B1, B2, B4, B6 and B7[1]

Project	Estimated amount of trash and debris removed in Tons and Cubic Yards (CY)[2]			
	FY14-FY20		FY21	
	Est. Tons	Est. CY	Est. Tons	Est. CY
B1: Impaired Water Bodies Improvement (KPI #3: Trash accumulation point mapping and removal)[3]	33	329	6.7	67
B2: Interagency Urban Runoff Program (KPI#1: Trash booms)[4]	6	64	0.2	2.2
B2: Interagency Urban Runoff Program (Hot spot cleanup)	23	227	1.7	17
B4: Good Neighbor Program: Encampment Cleanup[5]	6,385	89,389	109	1,523
B6: Good Neighbor Program: Remove Graffiti and Litter[5]	692	9,672	168	2,347
B7: Volunteer Cleanup Efforts and Education (KPI #2: Cleanup day events)[6]	313	3,118	62	620
Estimated Totals	**7,452**	**102,699**	**348**	**4,576**

[1]Grants and partnership trash removal information for Projects B3 and B7 are included in Table E-4.
[2]Some estimates may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons; and/or data that was processed after the previous report was developed.
[3]The trash accumulation point mapping started in FY16. Due to high flows during the winter of FY17, re-mapping was delayed and conducted in May and June 2017. Trash identified as part of this mapping effort will be cleaned in FY18.
[4]The San Francisco Bay Regional Water Quality Control Board has requested that all stormwater permittees report trash in volume rather than weight. Volume is a more meaningful measure of the trash present because it is not affected by the weight of wet vs. dry trash. For Projects B1 and B2, volume is visually estimated in the field and likely includes some vegetation and debris. Where data was only collected in weight, a conversion was used based on a solid waste calculator estimating 10 cubic yards per ton. Prior conversions were not consistent; as a result, the numbers in this table may not match previously reported numbers.
[5]Tons were converted to cubic yards using an estimate of 14 cubic yards per ton, which is based on a comparison with industry standard conversions and a watershed field operations field experiment and analysis. Project B4 and B6 quantities are based on landfill weights measured in tons.
[6]Project B7 grants and partnerships (KPI #1) and Adopt-A-Creek Program (KPI #2) are not included. Grants and partnerships information is included in Table E-4. Data is currently not available for the Adopt-A-Creek Program because the trash is removed by volunteers who do not consistently measure or report their results. Volunteers use number of bags and approximate weights to estimate pounds. Using pounds simplifies measurement for volunteers and is consistent with the efforts of other jurisdictions implementing Coastal Clean Up and National River Clean Up days. Pounds were converted to tons (2,000 pounds = 1 US ton). Tons were then converted to cubic yards using an estimate of 10 cubic yards per ton. For Project B7 cleanup day even totals, the Safe, Clean Water Program funds 55% of this project.

E-2: Estimated volume of trash removed by watershed for Projects B1, B2, B4, and B6[1]

San Francisco Bay Watersheds	Estimated cubic yards (CY) of trash and debris removed[2]	
	FY14-FY20	FY21
Lower Peninsula	2,901	104
West Valley	2,249	349
Guadalupe	19,352	1,267
Coyote	65,338	1,678
Uvas/Llagas (Pajaro)	9,487	543
Estimated Totals	**99,327**	**3,941**

[1]Watershed information is not reported for Projects B3 and B7.
[2]Some estimates may have slightly varied from past annual reports due to a refinement of the conversion from tons to cubic yards and the timing of collecting the annual estimates.

E-3: Estimated cost of trash removal activities for Projects B4, B6, and B7[1]

Project	Estimated costs for trash removal	
	FY14-FY20	FY21
B4: Good Neighbor Program: Encampment Cleanup	$7,325,423	$364,896
B6: Good Neighbor Program: Remove Graffiti and Litter[2]	$3,156,683	$864,082
B7: Volunteer Cleanup Efforts and Education	$805,924	$68,000
Estimated Totals	**$11,288,030**	**$1,296,978**

1 Cost information for trash removal activities are not available for Projects B1 and B2 because project budgets are tracked as a whole and not by specific KPI. Grants and partnership cost information for Projects B3 and B7 are included in Table E-4.
2 The Project B6 estimated totals were revised based upon the FY18 audited financials and revised Maximo reporting calculations.

E-4: Trash removal information from partnerships and grants for Projects B3 and B7

Estimated amount of trash and debris removed in Pounds, Tons, and Cubic Yards (CY) [1]									
Project	Grant Cycle	Grantee/ community partner	Grant Project Name	Amount Awarded	Total Project Cost	Status	Estimated Amount of Trash Removed		
							Pounds	Tons	CY
Pollution Prevention Partnerships and Grants (B3)	FY14	San José Parks Foundation	Trash Free Coyote Creek Cleanup and Surveillance Project	$26,783	$80,760	Closed (9/30/15)	82,000[1]	41	410
	FY14	California Product Stewardship Council	Secure Pharmaceutical Collection Bin Expansion	$206,417	$276,352	Closed (10/6/17)	8,929[1]	4.5	45
	FY16	South Bay Clean Creeks Coalition	South Bay Creek Cleanup Program	$60,000	$80,000	Closed (7/21/17)	20,000[3]	10[2]	100
	FY16	San Francisco Bay Wildlife Society	San Francisco Bay National Wildlife Refuge (NWR) Clean-Up 2016	$35,391	$73,390	Closed (3/22/18)	6,280	3.1[1]	31
	FY16	Santa Clara County Creeks Coalition	Trash Free North Coyote Creek Watershed Stewardship and Engagement Project	$89,596	$148,849	Closed (3/15/18)	60,000	30[1]	300
	FY18	Downtown Streets Team	Penitencia Creek Team	$122,280	$190,828	In progress	145,000	72	725[1]
	FY18	Downtown Streets Team	El Camino Clean Up	$122,280	$190,828	In progress	12,654[1]	6	63
	FY18	Santa Clara Valley Transportation Authority (VTA)	Keep Santa Clara Valley Beautiful Project	$78,285	$104,380	In progress	N/A	N/A	N/A
	FY19	City of San José (partnership)	Tully Road Ballfields Creek Cleanup Project	$200,000	$331,900	In progress	N/A	N/A	N/A
	FY20	Guadalupe River Park Conservancy	Reducing the Impacts of Litter Along the Guadalupe River Trail	$90,049	$225,100	In progress	N/A	N/A	N/A
	FY20	West Valley Clean Water Program Authority	School Site Stormwater Pollution Prevention Plans	$35,088	$78,230	Agreement execution in progress	N/A	N/A	N/A
	FY21	City of San José (Partnership)	Cash for Trash	$180,000	$310,500	In progress	N/A	N/A	N/A
Support Volunteer Cleanup Efforts and Education (B7)	FY14	Acterra	Acterra Lower Peninsula Healthy Creeks Project	$68,600	$179,910	Closed (9/30/16)	18,180[1]	9	90[2]
		Clean Water Fund	ReThink Disposable: Preventing Riparian Trash at the Source	$82,133	$174,036	Closed (7/6/17)	24,265[1]	12.1	121
		City of Sunnyvale	Schools Goin' Green	$32,250	$47,448	Closed (6/30/16)	4,189[1]	2	20[2]
		Save the Bay	Clean Bay Project	$60,000	$241,243	Closed (6/30/16)	2,200[1]	1	10[2]
	FY18	Gilroy Compassion Center	South County Creeks Team Project	$15,000	$40,973	In progress	N/A	N/A	N/A
	FY18	South Bay Clean Creeks Coalition	Los Gatos Creek TEAM 222 Project	$15,000	$19,995	Closed (12/8/20)	18,200	9.1[1]	91
	FY18	South Bay Clean Creeks Coalition	Friends of Coyote Creek Watershed North Coyote Creek Stewardship Project	$35,000	$46,665	In progress	40,800	20.4[1]	204
	FY18	South Bay Clean Creek Coalition (Partnership)	Guadalupe River/ Coyote Creek Watershed Community Engagement Project	$199,353	$199,353	In progress	N/A	N/A	N/A
	FY19	Gilroy Compassion Center	South County Creeks Team Project	$30,000	$38,590	In Progress	N/A	N/A	N/A
	FY19	Grassroots Ecology	Young Watershed Stewards Project	$44,301	$167,781	In Progress	N/A	N/A	N/A
	FY21	Grassroots Ecology	Coyote/Stevens Creek Watershed Community Engagement Project	$49,980	$101,026	Agreement execution in progress	N/A	N/A	N/A
	FY21	Silicon Valley Bike Coalition	Wheels and Waterways Project	$50,000	$81,214	Agreement execution in progress	N/A	N/A	N/A
						Estimated Total	**442,697** pounds	**220** tons	**2,210** cubic yards

[1] These numbers are the original reported by each grantee. The other numbers were converted by staff.
[2] This number was corrected from a previous miscalculation.
NOTE: Due to COVID-19 shelter-in-place orders and poor air quality due to wildfires, many grant-funded clean-up projects were put on hold in FY21.

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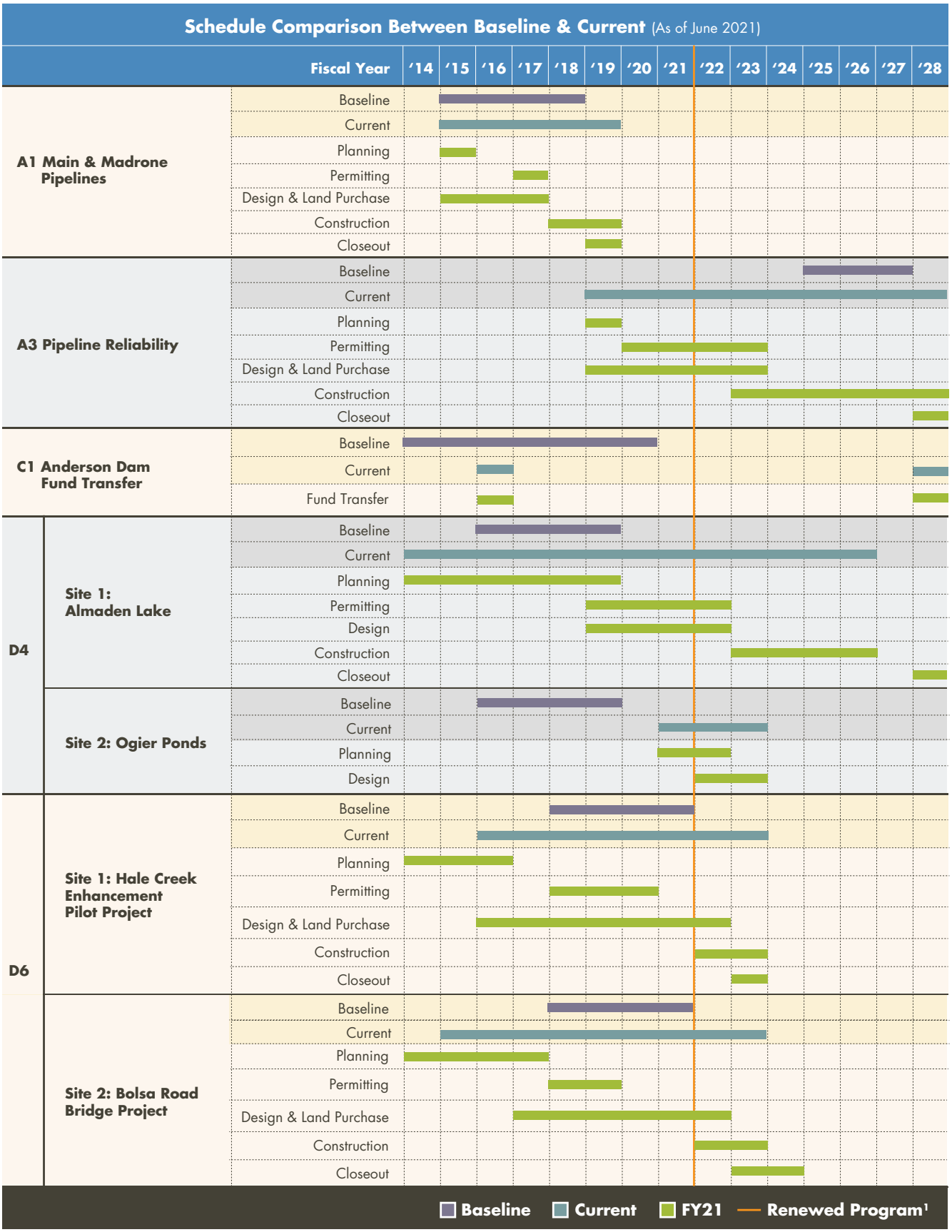
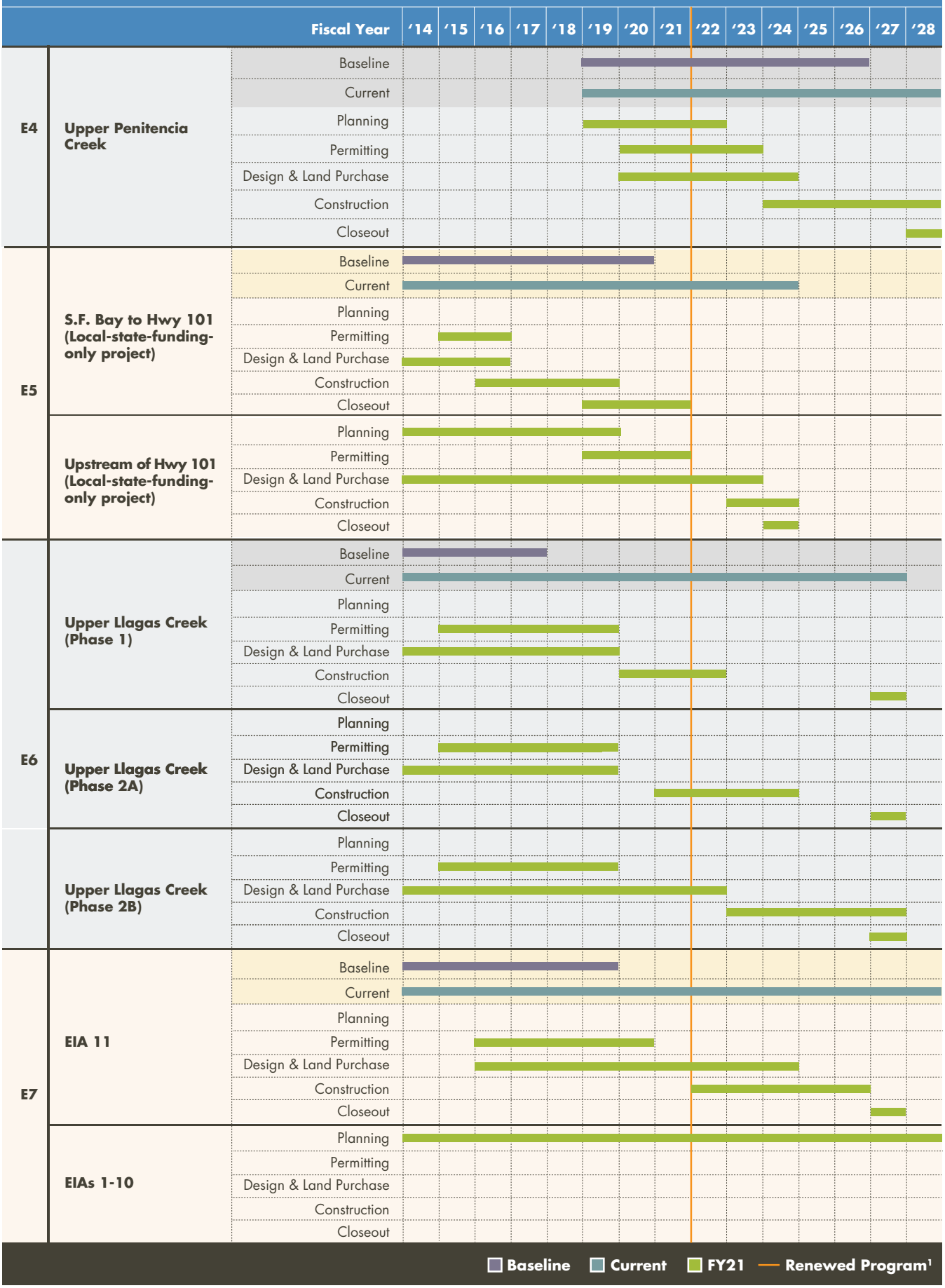
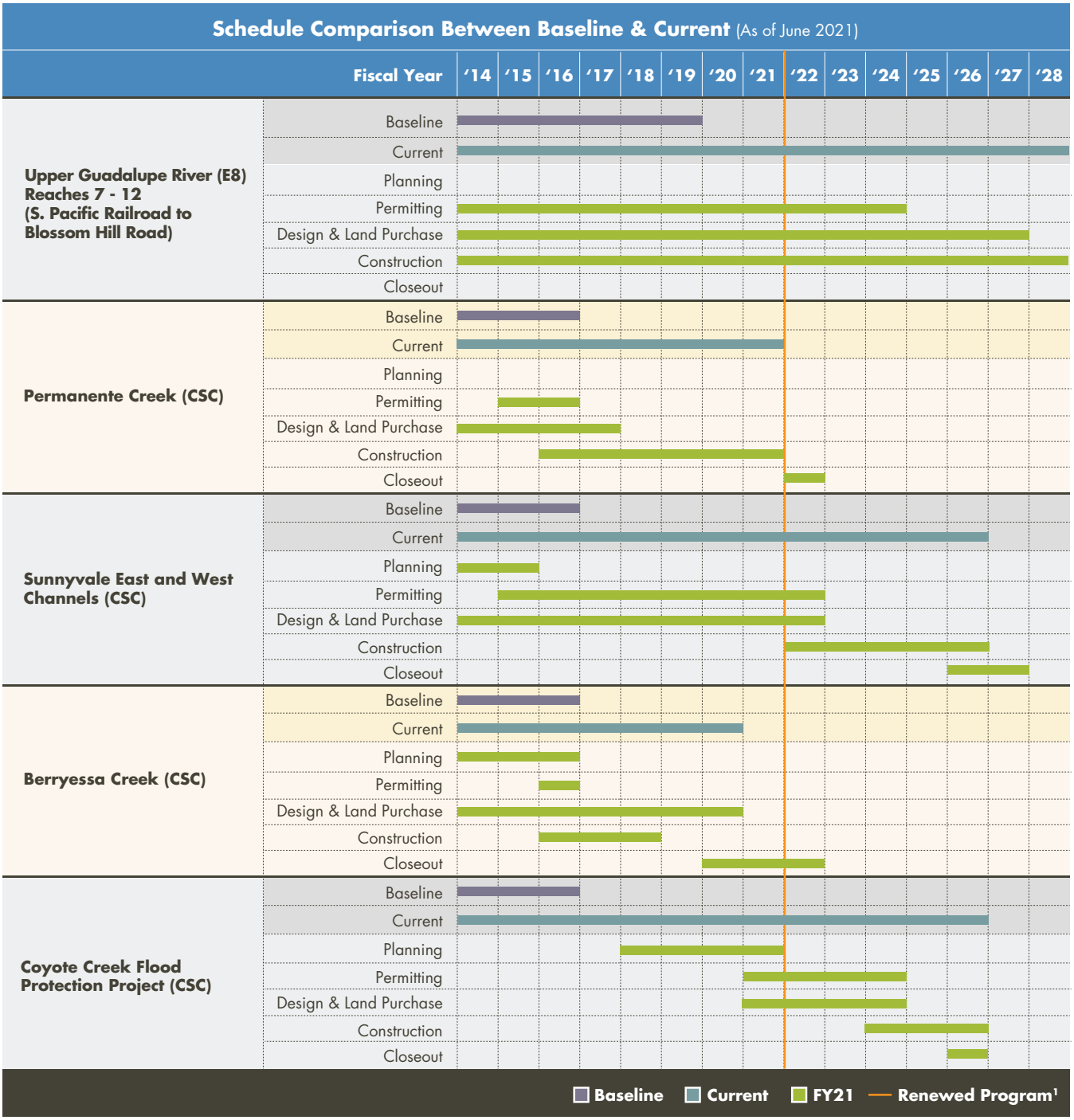
Appendix F: Schedule Comparison for Projects



Schedule Comparison Between Baseline & Current (As of June 2021)





[1] The orange line denotes the start of the renewed Safe, Clean Water Program that replaced the 2012 Program. The project schedule after this point is determined by activities in the renewed Program.

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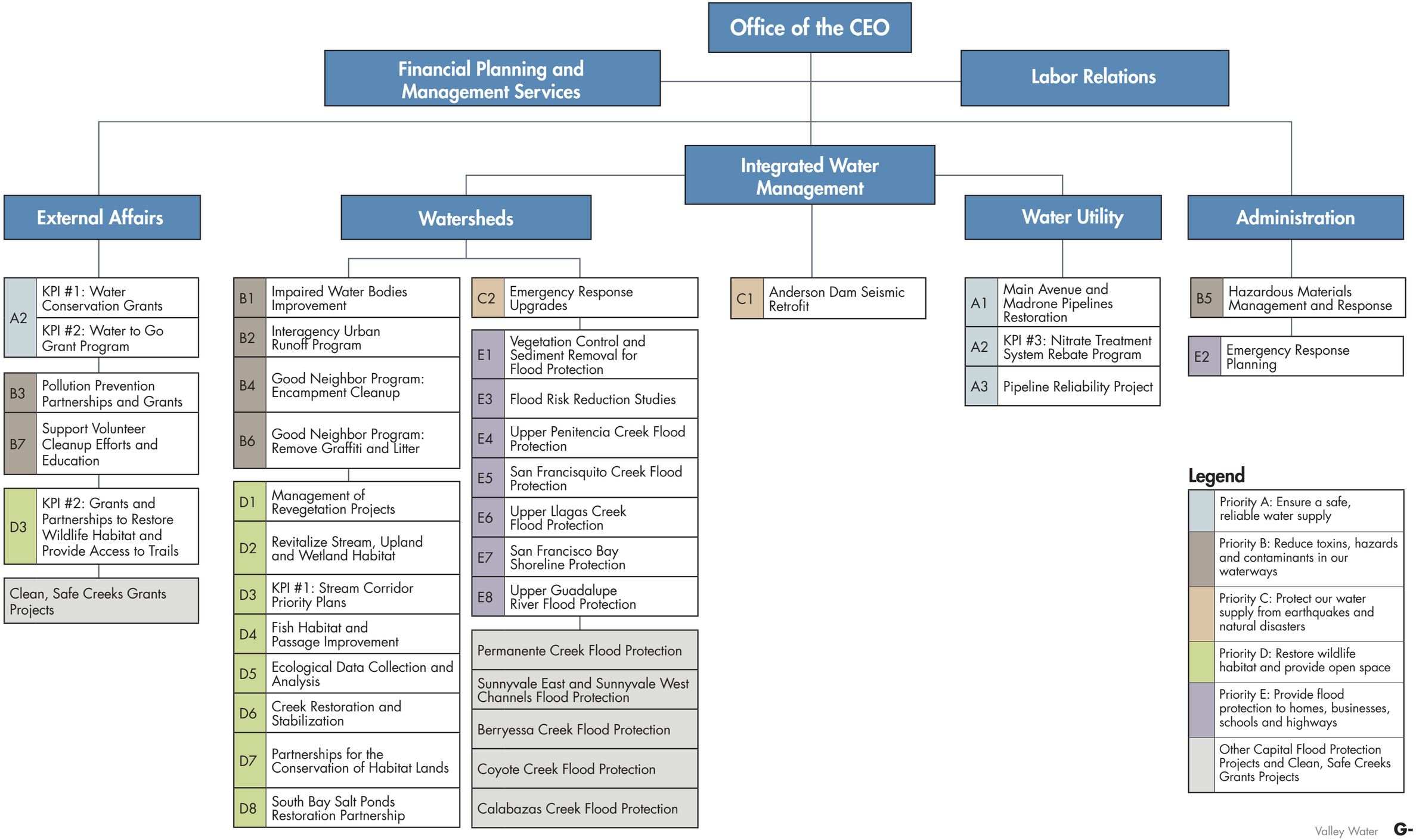
Appendix G: Projects by Organization Structure



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Appendix H: Projects by Valley Water Mission Area

Water Supply

- A1 Main Avenue and Madrone Pipelines Restoration
- A3 Pipeline Reliability Project
- C1 Anderson Dam Seismic Retrofit

Flood Protection

- B4 Good Neighbor Program: Encampment Cleanup
- C2 Emergency Response Upgrades
- E1 Vegetation Control and Sediment Removal for Flood Protection
- E2 Emergency Response Planning
- E3 Flood Risk Reduction Studies
- E4 Upper Penitencia Creek Flood Protection
- E5 San Francisquito Creek Flood Protection
- E6 Upper Llagas Creek Flood Protection
- E7 San Francisco Bay Shoreline Protection
- E8 Upper Guadalupe River Flood Protection

- Permanente Creek Flood Protection
- Sunnyvale East and Sunnyvale West Channels Flood Protection
- Berryessa Creek Flood Protection
- Coyote Creek Flood Protection
- Calabazas Creek Flood Protection

Stewardship

- A2 Safe, Clean Water Partnerships and Grants
- B1 Impaired Water Bodies Improvement
- B2 Interagency Urban Runoff Program
- B3 Pollution Prevention Partnerships and Grants
- B4 Good Neighbor Program: Encampment Cleanup
- B5 Hazardous Materials Management and Response
- B6 Good Neighbor Program: Remove Graffiti and Litter
- B7 Support Volunteer Cleanup Efforts and Education
- D1 Management of Revegetation Projects
- D2 Revitalize Stream, Upland and Wetland Habitat
- D3 Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails
- D4 Fish Habitat and Passage Improvement
- D5 Ecological Data Collection and Analysis
- D6 Creek Restoration and Stabilization
- D7 Partnerships for the Conservation of Habitat Lands
- D8 South Bay Salt Ponds Restoration Partnership

- E4 Upper Penitencia Creek Flood Protection
- E5 San Francisquito Creek Flood Protection
- E6 Upper Llagas Creek Flood Protection
- E7 San Francisco Bay Shoreline Protection

- Permanente Creek Flood Protection
- Clean, Safe Creeks Grants Projects

Legend

- Priority A: Ensure a safe, reliable water supply
- Priority B: Reduce toxins, hazards and contaminants in our waterways
- Priority C: Protect our water supply from earthquakes and natural disasters
- Priority D: Restore wildlife habitat and provide open space
- Priority E: Provide flood protection to homes, businesses, schools and highways
- Other Capital Flood Protection Projects and Clean, Safe Creeks Grants Projects

Please note that some projects have multiple benefits; therefore they are listed under more than one mission area.

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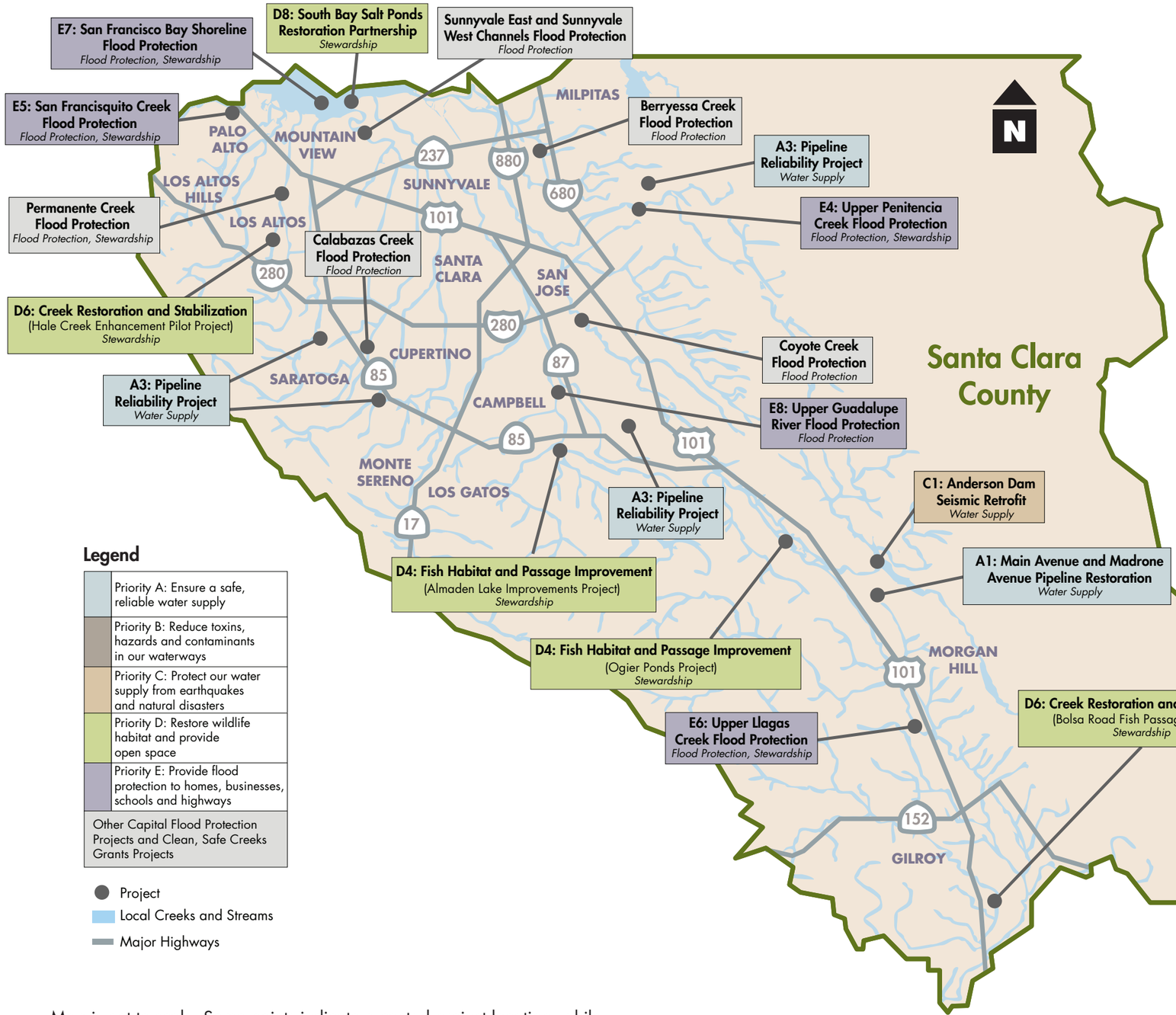
Appendix I: Countywide Map of Projects



Legend

	Priority A: Ensure a safe, reliable water supply
	Priority B: Reduce toxins, hazards and contaminants in our waterways
	Priority C: Protect our water supply from earthquakes and natural disasters
	Priority D: Restore wildlife habitat and provide open space
	Priority E: Provide flood protection to homes, businesses, schools and highways
Other Capital Flood Protection Projects and Clean, Safe Creeks Grants Projects	

- Project
- Local Creeks and Streams
- Major Highways

Countywide Projects

A2: Safe, Clean Water Partnerships and Grants *Stewardship*	D1: Management of Revegetation Projects *Stewardship*
B1: Impaired Water Bodies Improvement *Stewardship*	D2: Revitalize Stream, Upland and Wetland Habitat *Stewardship*
B2: Interagency Urban Runoff Program *Stewardship*	D3: Grants and Partnerships to Restore Wildlife Habitats and Provide Access to Trails *Stewardship*
B3: Pollution Prevention Partnerships and Grants *Stewardship*	D4: Fish Habitat and Passage Improvement *Stewardship*
B4: Good Neighbor Program: Encampment Cleanup *Flood Protection, Stewardship*	D5: Ecological Data Collection and Analysis *Stewardship*
B5: Hazardous Materials Management and Response *Stewardship*	D7: Partnerships for the Conservation of Habitat Lands *Stewardship*
B6: Good Neighbor Program: Remove Graffiti and Litter *Stewardship*	E1: Vegetation Control and Sediment Removal for Flood Protection *Flood Protection*
B7: Support Volunteer Cleanup Efforts and Education *Stewardship*	E2: Emergency Reponse Planning *Flood Protection*
C2: Emergency Response Upgrades *Flood Protection*	E3: Flood Risk Reduction Studies *Flood Protection*
	Clean, Safe Creeks Grants Projects *Stewardship*

Map is not to scale. Some points indicate a central project location, while the geographic area of benefit may be broader. For an interactive map with specific project locations and reaches, visit valleywater.org.

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Appendix J: Glossary

1% flood
A flood that has a 1% chance of occurring in any given year; also referred to as a 100-year flood.

50-year flood
A flood that has a 2% chance of occurring in any given year.

100-year flood
A flood that has a chance of occurring an average of once every 100 years; also referred to as a 1% flood.

Acre-feet (AF)
An acre-foot of water would cover 1 acre of land to a depth of 1 foot. 1 acre-foot equals approximately 325,000 gallons, the average amount of water used by 2 families of 5 in 1 year.

Advanced Quantitative Precipitation Information (AQPI)
A regional project awarded to the NOAA which consists of improved mapping and weather data for estimating precipitation, as well as a series of updated forecasting systems for more accurate weather prediction.

Anaerobic
Defines an absence of oxygen or an organism which does not require oxygen to live.

Atmospheric river (AR)
Long, narrow regions in the atmosphere which transport most of the water vapor outside the tropic regions. When atmospheric rivers face landfall, they deposit most of their vapors in the form of rain or snow.

Aquifer
An underground geologic formation of rock, soil, or sediment that is saturated with water; an aquifer stores groundwater.

Booms
Increase in populations which signal almost or near-exponential growth.

Bypass channel
A channel built to carry excess water from a stream, or to divert water from the main channel.

Budget adjustment
A procedure to revise a budget appropriation, usually completed by either of two methods: (1) the Board of Directors approve the adjustment through the transfer of appropriations between funds, or through additional revenues or appropriations or (2) the CEO authorizes the adjustment of appropriations within a fund and within Operating Budget or within Capital Budget.

Carryforward
A portion or total of the unspent balance of an appropriation that is made available for expenditure in the succeeding fiscal year.

Glossary

Capital projects
Projects that are budgeted within the Capital Budget and fall within the definition of Capital Expenditures, meaning they (1) create or extend the lives of assets, (2) their work products have a useful life of greater than two years, and they involve an expenditure of Valley Water resources in excess of $50,000.

Change Control Process: Over the life of the Safe, Clean Water Program, Valley Water may need to update or adjust the Program due to various reasons, such as regulatory, economic and technological changes outside the scope of Valley Water's activities. As described in the original Program Report, the Board must approve any Program changes in an open and public meeting. Furthermore, to ensure transparency and accountability to the community, the Board approved a Change Control Process.

Cleanup
The removal of trash and debris resulting from encampments; by Valley Water or by Valley Water in coordination with other agencies.

COVID-19
Disease caused by novel coronavirus, which has become a pandemic in the United States in 2020.

Diameter at breast height (DBH)
Standard for measuring the diameter of a tree, most often measured at 4.5 feet (1.7m) above the ground. This specified height is where data points such as growth, volume, and yield tables are collected.

Ecosystem
An ecological community of plants, animals, and microorganisms in their environment, functioning together as a unit.

Ecological service index (ESI)
Index used to measure ecosystem services within multifunctional landscapes, typically defined as a synergistic approach to bridge the gap between ecological services and the needs of a particular landscape.

Ecotone
Transition area between two differing ecological spaces. Retains some of the characteristics of each respective ecological space, yet contains species not typically found in either environment.

Encampment (homeless)
1 or more structures occupied by an individual or family that is located illegally on Valley Water or other public property. An area where there are no structures, but where personal property is stored is also considered an encampment.

Environmental enhancement
Action taken by Valley Water that benefits the environment, is not mitigation and is undertaken voluntarily. Enhancement actions may include environmental preservation or creation. In instances where enhancements are located in the same vicinity as a mitigation project, actions must exceed required compliance activities to be considered environmental enhancements.

Glossary

Environmental stewardship
To entrust the careful and responsible management of the environment and natural resources to one's care for the benefit of the greater community.

Epilimnion
The upper, wind-mixed layer of a lake which has been thermally stratified.

Erosion
The process by which soil is removed from a place by forces such as water or construction activity, and eventually deposited at a new place as sediment.

FEMA 1% Flood Risk Zone
Per FEMA modeling, this is the area representing parcels that have a 1% chance of experiencing 1 foot or greater flooding in any given year.

Fiscal year (FY)
A period that a company or government uses for accounting purposes and preparing financial statements. The fiscal year may or may not be the same as a calendar year. Valley Water uses a fiscal year that begins on July 1 and ends on June 30, which coincides with the State of California's fiscal year. The fiscal year is denoted by the year in which it ends, so spending incurred on November 14, 2015, would belong to fiscal year 2016. The federal government's fiscal year begins on October 1 and ends on September 30.

Fisheries
An area with an associated fish or aquatic population.

Fish and Aquatic Habitat Collaborative Effort (FAHCE)
Seeks to improve aquatic spawning and rearing habitat and fish passage for migration to and from the watersheds of Coyote and Stevens creeks as well as Guadalupe River. Improvements include modifications to reservoir operations to provide instream flows, restoration measures to improve habitat conditions and fish passage, as well as monitoring and adaptive management techniques.

Fish passage
A generic term for several methods incorporated into flood protection projects which allow native fish species to travel upstream to spawn.

Flood
A temporary inundation of inland or tidal waters onto normally dry land areas.

Flood conveyance capacity
The maximum amount of water that can flow through a channel, stream, or culvert before there is flooding of surrounding properties.

Floodplain
The low, flat, periodically flooded lands adjacent to creeks and rivers.

Glossary

Floodplain management
A city or county program of corrective, preventive and regulatory measures to reduce flood damage and encourage the natural and beneficial functions of floodplains. Careful local management of development in the floodplains results in construction practices that can reduce flood damages.

Floodwall
Walls used as levees to contain floodwaters within a stream. Floodwalls are used when right-of-way is limited.

Geomorphology/geomorphic
The study of the natural relationship between a stream and its bank and bed; pertaining to those processes that affect the form or shape of the surface of the earth, including creeks and streams.

Geotechnical
A field of study which explicitly deals with soil and rock behavior from an engineering perspective. Geotechnical engineers must assess risks such as landslides, slope stability, falling rocks, and avalanches.

Groundwater
Water that is found beneath the surface in small pores and cracks in the rock and substrate.

Groundwater Recharge
The addition of new water to an aquifer or to the zone of saturation. See groundwater.

Habitat
The specific, physical location or area in which a particular type of plant or animal lives. To be complete, an organism's habitat must provide all of the basic requirements of life for that organism.

Hydraulics
The properties and behaviors of fluids, such as water.

Hydrology
The behavior (properties, distribution and circulation) of water in the atmosphere, on land and in the soil.

Hypolimnion
Dense, bottom layer of water in a thermally stratified lake. In the summer, lakes separate into layers: epilimnion (top of the lake) and the hypolimnion (bottom), with a thermocline layer in the middle. Typically, the hypolimnion is the coldest layer of a lake in summer and is isolated from surface wind-mixing. During stratification, oxygen can be depleted in the hypolimnion.

Hypolimnion Oxygenation Systems
Commonly used to increase dissolved oxygen concentrations in the hypolimnion of lakes and reservoirs. Benefits include maintenance of an oxygenated source to cool water, decrease in nutrient loading, inhibiting the release of harmful sediments, as well as maintaining a summer habitat for cold-water organisms.

Glossary

Impaired water bodies
Waters that are too polluted or otherwise degraded to meet the water quality standards set by the State of California. Under the federal Clean Water Act, California is required to develop lists of impaired water bodies, including creeks, streams, and lakes.

Invasive plants
A non-native plant species that has spread into native or minimally managed plant communities (habitats).

Large woody debris (LWD)
The logs, sticks, branches, and other wood that falls into streams and rivers. This debris can influence the flow and shape of the stream channel. LWD plays an important biological role in streams by increasing channel complexity, enhancing fish habitat, and creating diversity in the food web.

Levee
An embankment constructed to provide flood protection from seasonal high water.

Limiting factors analysis (LFA)
An analysis of environmental factor that limits the growth, abundance or distribution of a population of organisms in an ecosystem.

Methylation
The complex process by which inorganic mercury in surface water is converted to toxic methylmercury, the only form of mercury that accumulates appreciably in fish.

Methylmercury
An organic, highly toxic form of mercury that easily bioaccumulates in organisms, increasing in concentration as it travels up the food chain. Because of mercury contamination the public is advised against consuming fish caught in some Santa Clara County reservoirs and ponds.

Mitigation
Action taken to fulfill CEQA/NEPA, permit requirements and court-mandates to avoid, minimize, rectify or reduce adverse environmental impacts, or compensate for the impact(s) by replacing or providing substitute resources or environments.

Mitigated negative declaration (MND)
A negative declaration that incorporates revisions (mitigation measures) in the proposed project to ensure that no significant impacts on the environment can or will occur.

Modified floodplain
A flood protection technique where land adjacent to a creek is lowered, allowing floodwaters to spread out over a wider area while containing the flow, and reducing the risk of damaging floods. A modified floodplain is often planted with native riparian species.

Glossary

Natural flood protection
A multiple-objective approach to providing environmental quality, community benefit and protection from creek flooding in a cost-effective manner through integrated planning and management that considers the physical, hydrologic and ecologic functions and processes of streams within the community setting.

Operations project
Projects are budgeted within the Operating Budget and fall within the definition of Operating Expenditures. Although Operating Projects may, in some cases, create or extend the life of an asset and may have a useful life greater than two years, their costs may be under $50,000. Valley Water management may still decide to designate some Operating Projects as Capital Projects for purposes of giving the work visibility, control and resources beyond a normal operating budget.

Oxygenation treatment systems
Treatment systems that help increase the relative oxygen levels in a body of water.

Pay-as-you-go
A funding mechanism which collects revenue until sufficient funds are available to begin construction of a project, in contrast to debt financing, in which a large sum is borrowed so that construction can begin sooner.

Permitting requirements
A mechanism used to enforce state and federal laws that protect environmentally sensitive areas. Before moving forward on projects, Valley Water is required to obtain permits from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, NOAA Fisheries, Regional Water Quality Control Board, and the California Department of Fish and Wildlife. Each permit gives the permitting agency an opportunity to attach specific measures to the project to reduce impact on the environment.

Plant palette
A master list of appropriate plants that can be drawn from to create a specific assemblage of plants well-matched to a particular area or project's physical, hydrological and ecological conditions.

Preservation
Action taken to protect an ecosystem or habitat area by removing a threat to that ecosystem or habitat, including regulatory actions and the purchase of land and easements.

Project adjustment: Under the Safe, Clean Water Program Change Control Process, changes to the Program are categorized as either an adjustment or a modification. Adjustments are changes to a project's description, benefits, geographic area of benefit, funding or schedule that don't impact project key performance indicators (KPIs). The Board can approve project adjustments during a public board meeting.
Project modification: Under the Safe, Clean Water Program Change Control Process, changes to the Program are categorized as either an adjustment or a modification. Changes to project KPIs or a decision not to implement a project are considered modifications. Project modification requires a public hearing that must be publicly noticed as per California Government Code § 6066.

Reach (creek)
A portion of a creek or watercourse usually defined by both an upstream and a downstream unit.

Glossary

Respond
For hazardous materials response (project B5) "Responded to" means that responder arrives at site within 2 hours. For litter and graffiti removal (project B6) "Responded to" means that a request for Valley Water action is acknowledged either verbally, in writing, or by email within 5 working days.

Restoration/restore
Action taken by Valley Water, to the extent practicable, toward the re-establishment as closely as possible of an ecosystem's pre-disturbance structure, function, and value, where it has been degraded, damaged, or otherwise destroyed.

Revegetate
To re-establish vegetation in areas which have been disturbed by project construction.

Revitalize
Improve habitat value, particularly in an effort to connect contiguous creek reaches of higher value, by removing invasive, non-native vegetation and diseased and/or non-thriving specimens, applying mulch to suppress weed competition, revegetating sites with native plants, and installing predation prevention measures such as browse protection or cautionary fencing to reduce impacts from animals and vandals.

Riparian
Pertaining to the banks and adjacent terrestrial habitat of streams, creeks or other freshwater bodies and watercourses.

Riparian corridor
The riverside or riverine environment next to a stream channel.

Riparian ecosystem
A natural association of soil, plants and animals existing within the floodplain of a stream and dependent for their survival on high water tables and river flow.

Sediment/sedimentation
Mineral or organic material that is deposited by moving water and settles at the bottom of a waterway. Sediment in a lake, reservoir or stream can either be suspended in the water column or deposited on the bottom. Sediment usually consists of eroded material from the watershed, precipitated minerals and the remains of aquatic organisms.

Special status species
Any species that is listed or proposed for listing as threatened or endangered by the U.S. Fish and Wildlife Service or National Marine Fisheries Service under the provisions of the Endangered Species Act; any species designated by the U.S. Fish and Wildlife Service as a "listed," "candidate," "sensitive," or "species of concern," and any species which is listed by the State of California in a category implying potential danger of extinction.

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Special tax
Any tax imposed for specific purposes or any tax imposed by a special purpose district or agency, such as the Santa Clara Valley Water District. A special district contemplating a special tax levy must hold a noticed public hearing and adopt an ordinance or resolution prior to placing the tax on the ballot. The ordinance or resolution must specify the purpose of the tax, the rate at which it will be imposed, the method of collection, and the date of the election to approve the tax levy. Approval by a 2/3 vote of the city, county or district electorate is necessary for adoption.

State Water Resources Control Board
The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The mission of the State Water Board is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. There are 9 regional water quality control boards that exercise rulemaking and regulatory activities by basin. Santa Clara County is part of 2 regions: Region 2 - San Francisco Regional Water Quality Control Board (north of Morgan Hill) and Region 3 - Central Coast Regional Water Quality Control Board (south of Morgan Hill).

Subvention
Subventions are reimbursements for rights-of-way and relocation costs of channel improvements and levee projects provided to flood control agencies by the Department of Water Resources Flood Subventions Program.

Stream Corridor Priority Plan (SCPP)
A document which identifies priorities for stream restoration and can be a source of information to guide restoration actions by all parties.

Stream maintenance program (SMP)
Ensure flood protection projects continue to function as designed to protect homes and businesses along Valley Water streams. SMP work includes removal of sediment, management of vegetation, clearing of trash and debris, stabilization of eroded riverbanks over portions of 278 miles of creeks in Santa Clara County.

Stratification
Layering that occurs in most sedimentary rocks and in igneous rocks which have been formed at the Earth's surface from lava flows and fragmental deposits. Layers range from several millimeters to several meters in thickness and vary in shape greatly.

Threatened species
A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Total Maximum Daily Loads (TMDLs)
The maximum pollutant load a waterbody can receive (loading capacity) without violating water quality standards.

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Trash capture devices
Innovative devices used to capture wastes and trash in bodies of water and on land. Comprise of nets and sharp implements which can snare waste items.

Urban runoff
The water that runs over the impervious areas in cities, collecting pollutants as it flows. Runoff is recognized as a major source of water impairment.

Valley Water 1% Flood Risk Zone
Per Valley Water modeling, this is the area representing parcels that have a 1% chance of experiencing flooding, including less than 1 foot, in any given year.

Watershed
Land area from which water drains into a major body of water.

Watershed stewardship
Protecting and enhancing the county's creeks, streams and water bodies to preserve a vibrant, healthy ecosystem and provide recreational opportunities when appropriate.

Wetland
Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation adapted for life in saturated soil conditions, as well as the diverse wildlife species that depend on this habitat.

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Valley Water

Clean Water • Healthy Environment • Flood Protection

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